

PREscore 1.0 - PRESCORE.TCL File 12/23/91  
NPL Characteristics Data Collection Form  
Jennison Wright Corp - 09/17/93

PAGE: 1

Record Information

1. Site Name: Jennison Wright Corp  
(as entered in CERCLIS)
2. Site CERCLIS Number: ILD006282479
3. Site Reviewer: Gregory W. Dunn
4. Date: S
5. Site Location: Granite City, Madison County, Illinois  
(City/County,State)
6. Congressional District: IL-21
7. Site Coordinates: Single  
Latitude: 38°42'30.7" Longitude: 090°09'09.5"

Site Description

1. Setting: Urban
2. Current Owner: Other - Bankruptcy Trustee
3. Current Site Status: Inactive
4. Years of Operation: Inactive Site, from and to dates: 1920 to 1989
5. How Initially Identified: Other Federal Program
6. Entity Responsible for Waste Generation:
  - Manufacturing
  - Lumber & Wood
7. Site Activities/Waste Deposition:
  - Surface Impoundment
  - Waste Piles
  - Illegal Dumping
  - Tanks - Above Ground
  - Tanks - Below Ground

Waste Description

8. Wastes Deposited or Detected Onsite:

- Organic Chemicals
- Inorganic Chemicals
- Acids/Bases
- Metals
- Creosote
- PCP
- Dioxins

Response Actions

9. Response/Removal Actions:

- Site Access Has Been Restricted

RCRA Information

10. For All Active Facilities, RCRA Site Status:

- Not Applicable

Demographic Information

11. Workers Present Onsite: No

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 11606.0

14. Residential Population Within 4 Miles: 44167.0

Water Use Information

15. Local Drinking Water Supply Source:

- Other - Mississippi River

16. Total Population Served by Local Drinking Water Supply Source: Not Applic
17. Drinking Water Supply System Type for Local Drinking  
Water Supply Sources:
- Municipal (Services over 25 People)
18. Surface Water Adjacent to/Draining Site:
- None

Non-responsive



**HRS DOCUMENTATION RECORD--REVIEW COVER SHEET**

**Name of Site:** Jennison-Wright Corporation

**Contact Persons**

**Site Investigation:** Gregory W. Dunn (217) 782-6760  
(Name) (Telephone)

**Documentation Record:** Gregory W. Dunn (217) 782-6760  
(Name) (Telephone)

**Pathways, Components, or Threats Not Evaluated**

The Groundwater Pathway and the Surface Water Pathway are not being evaluated or scored at this time.

Non-responsive

## REFERENCES

### Reference

#### Number      Description of the Reference

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2. U.S. EPA, October 1992, Superfund Chemical Data Matrix (SCDM).
3. United States Geological Survey, 1951, photoinspected 1979, photorevised 1968 and 1974, Columbia Bottom, Illinois-Missouri Quadrangle, 7.5 Minute Series: 1:24,000. 1 page.
4. United States Geological Survey, 1954, photorevised 1982, Granite City, Illinois-Missouri Quadrangle, 7.5 Minute Series: 1:24,000. 1 page.
5. United States Geological Survey, 1954, photorevised 1968 and 1974, Monks Mound, Illinois Quadrangle, 7.5 Minute Series: 1:24,000. 1 page.
6. United States Geological Survey, 1955, photorevised 1968 and 1974, Wood River, Illinois-Missouri Quadrangle, 7.5 Minute Series: 1:24,000. 1 page.
7. United States Department of the Interior, Fish and Wildlife Service, 1988 National Wetlands Inventory Map for Columbia Bottom, Illinois-Missouri, 1:24,000. 1 page.
8. United States Department of the Interior, Fish and Wildlife Service, 1988 National Wetlands Inventory Map for Granite City, Illinois-Missouri, 1:24,000. 1 page.
9. United States Department of the Interior, Fish and Wildlife Service, 1988 National Wetlands Inventory Map for Monks Mound, Illinois-Missouri, 1:24,000. 1 page.
10. United States Department of the Interior, Fish and Wildlife Service, 1988 National Wetlands Inventory Map for Wood River, Illinois-Missouri, 1:24,000. 1 page.
11. Cole-Layer-Trumble Company, February 8, 1974, revised November 23, 1992, Venice Township Madison County, Illinois Tax Map, map number 19-13-16, prepared for Madison County Board Members. 1 page.
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13. United States Department of Commerce, August 1991, Economics and Statistics Administration, Bureau of the Census, 1990 Census of Population, General Population Characteristics, Illinois, 1990-CP-1-15. 859 pages.
14. Illinois Environmental Protection Agency, May 15, 1992, Notice Pursuant To Section 4(q) of the Environmental Protection Act, 56 pages.

15. Dunn, Greg, November 25, 1992, Pre-Notice Program, Illinois EPA, memorandum to Division file. 4 pages.
16. Madison County Records Office, deed records, researched by Pete Sorensen, Illinois EPA. 28 pages.
17. Illinois Inspection Bureau, November 7, 1924, Midland Creosoting Company Granite City, Illinois, map, Report No. S-436, File No. 12317. 1 page.
18. Cyphert, Michael A., November 22, 1985, Legal Counsel for Jennison-Wright Corporation, letter and RCRA Closure Application, to Kathleen Homer, U.S. EPA Region V RCRA Enforcement Section. 15 pages.
19. Ecology and Environment, Inc., December 1985, Compliance Investigation Report The Jennison-Wright Corp. Wood Treatment Facility Granite City, Illinois. 131 pages.
20. Illinois Environmental Protection Agency, Field Operations Section, May 6, 1986, RCRA Inspection Report for Jennison-Wright Corporation, U.S. EPA ID: ILD006282479. 16 pages (missing photographs).
21. Illinois Environmental Protection Agency, January 15, 1986, Consent Decree, The Jennison-Wright Corporation and J.W. Liquidating Trust plaintiffs, No. 86-CH-13. 15 pages.
22. Runyan, Tim, February 5, 1993, Inspections and Operations Unit, Illinois Department of Nuclear Safety, telephone conversation, contacted by Greg Dunn of the Illinois EPA. 1 page.
23. Bell, Cathy, February 8, 1993, Pesticide Section, U.S. EPA, telephone conversation, contacted by Greg Dunn of the Illinois EPA. 1 page.
24. Marvel, Todd, February 23, 1993, Field Operations Section, Illinois EPA, memorandum to Greg Dunn, Illinois EPA. 1 page.
25. Illinois Environmental Protection Agency, May 23, 1986, letter from Larry Eastep of the Illinois EPA to The Jennison-Wright Corp. 6 pages.
26. Dunn, Greg, November 29, 1988, log book notes for the Screening Site Inspection at the Jennison-Wright Corporation facility, U.S. EPA ID: ILD006282479. 8 pages.
27. Dunn, Greg, July 30-31, 1991, log book notes for Expanded Site Inspection at the Jennison-Wright Corporation facility, U.S. EPA ID: ILD006282479. 9 pages.
28. Turpin, Ron, May ??, 1993, Quality Assurance Section, Illinois EPA, memorandum to Greg Dunn of the Illinois EPA. 1 page.
29. Turpin, Ron, May ??, 1993, Quality Assurance Section, Illinois EPA, memorandum to Greg Dunn of the Illinois EPA. 1 page.
30. Riedel Environmental Services, Inc., June 22, 1992, Jennison-Wright Facility Granite City, Illinois, Final Report, Asbestos Removal Drum-Soil-Water Removal. 83 pages (missing photographs).

- ✓ 31. Burton, Lowell, July 24, 1991, former Plant Manager, Jennison-Wright Corporation, telephone conversation, contacted by Steve Davis of Illinois EPA. 1 page.
32. Agricultural Stabilization and Conservation Service, June 10, 1978, aerial photograph of Granite City, Illinois, 17119-178 160X, approximate scale 1 inch = 310 feet. 1 page.
33. Illinois Environmental Protection Agency, September 1991, Expanded Site Inspection Analytical Results Jennison-Wright Corporation, U.S. EPA ID: ILD006282479. 118 pages.
- ✓ 34. Petrella, Pat, December 14, 1989, Manager, Governmental Affairs Jennison-Wright Corporation, letter to Steve Davis, Illinois EPA Federal Sites Management Unit. 1 page.
35. Illinois Department of Transportation, October 15, 1973, aerial photograph of Jennison-Wright Corporation, R-2222 Exposure 29, approximate scale 1 inch = 200 feet. 1 page.
36. Jennison-Wright Corporation, May 1, 1980, Spill Prevention Control and Countermeasure Plan (SPCC). 13 pages.
37. Apex Appraisal Company, April 30, 1978, map of the Jennison-Wright Corporation facility in Granite City, Illinois. 1 page.
38. Volume calculations for the two above ground storage tanks located at the Jennison-Wright Corporation facility. 1 page.
39. Agricultural Stabilization and Conservation Service, September 3, 1955, aerial photograph of Granite City, Illinois, SJ-4P-70TC, approximate scale 1 inch = 310 feet. 1 page.
40. Helmers, Dave and Liss, Kenn, September 7, 1984, Compliance Monitoring Section, Illinois EPA, memorandum to Division File. 2 pages.
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42. Woodward Clyde Consultants, August 1988, Site Assessment Report The Jennison-Wright Facility Granite City, Illinois. 182 pages.
43. Lee, Paul, October 30, 1991, Hydrogeologic Investigation and Evaluation Unit, Illinois Environmental Protection Agency, memorandum to Sherry Otto, Illinois Environmental Protection Agency. 10 pages (missing photographs).
44. Area calculations for the Jennite Pit and the 22nd Street lagoon located on the south side of the Jennison-Wright Corporation facility. 1 page.
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46. Funk, Linda, July 9, 1991, Division of Air Pollution Control, Illinois EPA, fax to Stephen Davis, Illinois EPA. 10 pages.

64. Birbey, Barbara, February 23, 1993, Receptionist at Prather Junior Middle School, telephone conversation, contacted by Pete Sorensen of the Illinois EPA. 2 pages.
65. Spencer, Diane, March 30, 1983, Field Operations Section, Illinois EPA, memorandum to Illinois EPA Division File. 2 pages
66. Lutz, Richard W., August 8, 1991, Supervisor Impact Analysis Section, Illinois Department of Conservation, letter to Greg Dunn, Illinois EPA. 3 pages.
67. Illinois Manufacturers' Association, September 30, 1920, Directory of Illinois Manufacturers. 1300 pages.

#### Appendices

- A Four-Mile Radius Map
- B Four-Mile Census Tract Map
- C Level I & Level II Soil Sample Location Map
- D Four-Mile Radius Wetland Map

TABLE 5-1  
Non-responsive

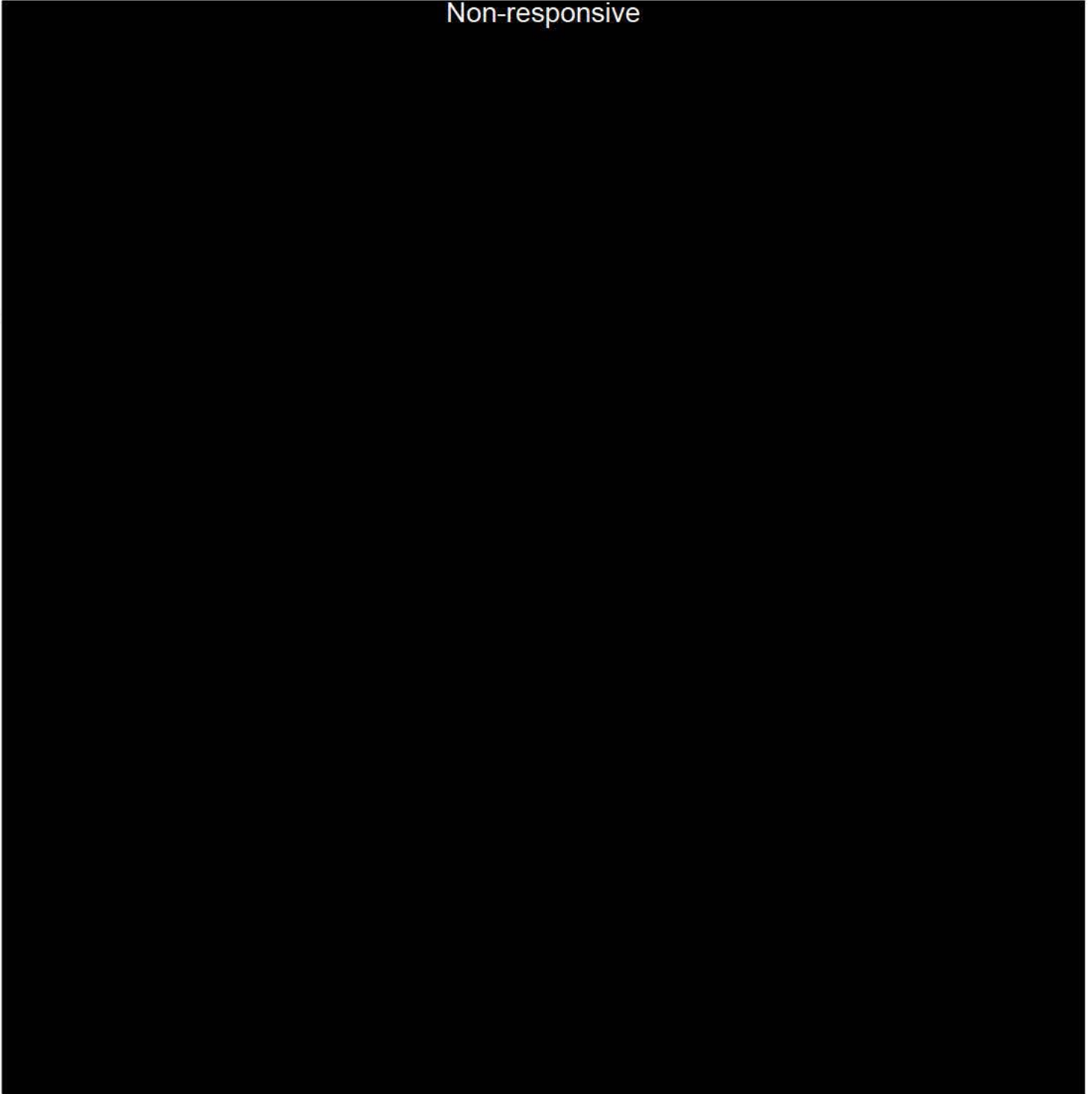


TABLE 5-1 (Concluded)  
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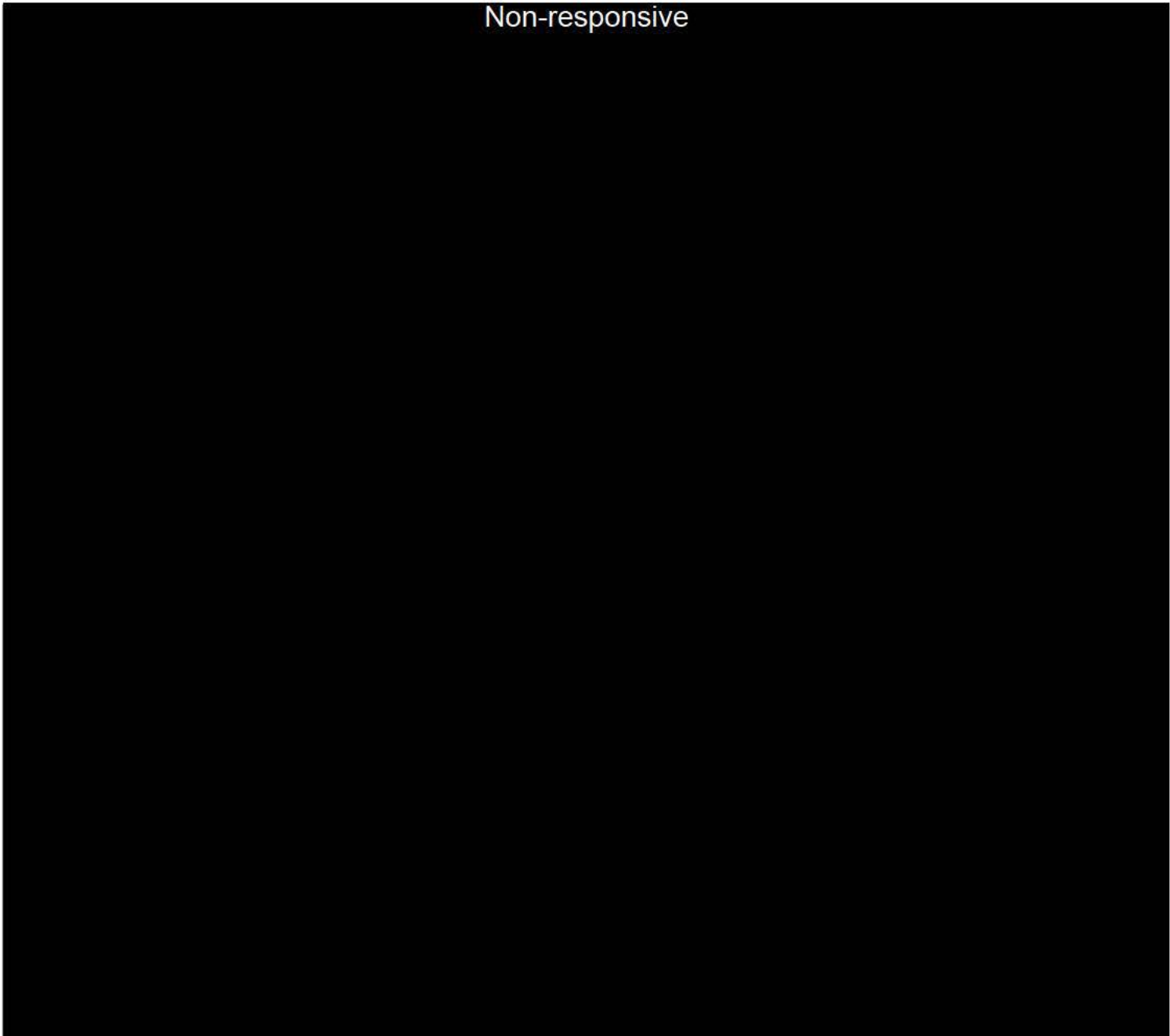
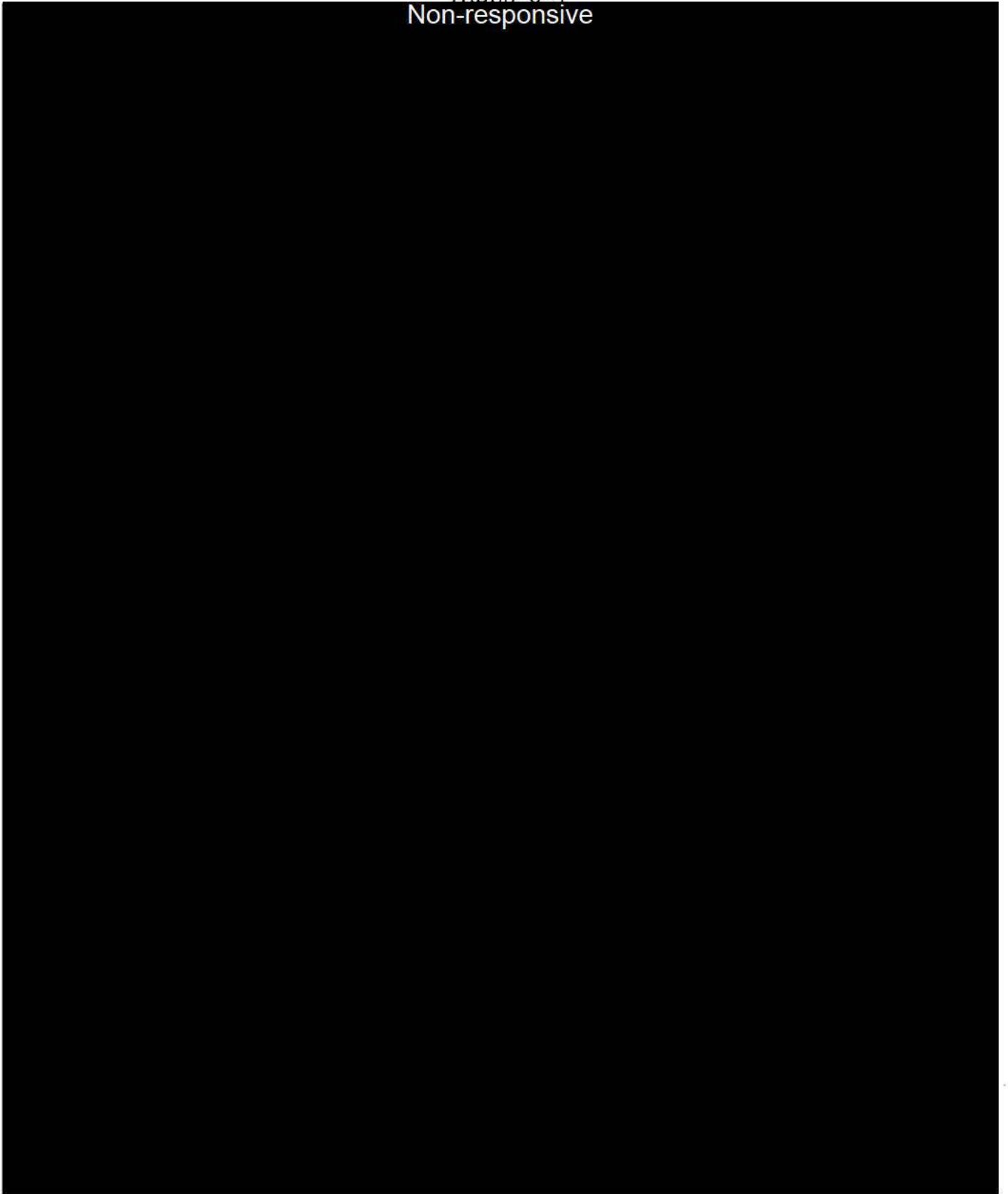




TABLE 6-1  
Non-responsive



## SOURCE DESCRIPTION

## 2.2 Source Characterization

The Jennison-Wright Corporation owns approximately 20 acres of land (Reference 11; Reference 12) within the western portion of Granite City, Illinois (Reference 4; Figure 2-1 and Figure 2-2). Granite City is a medium sized southwestern Illinois town, with a 1990 population of 32,862 residents (Reference 13, page 57). The city is located east of the Mississippi River and the Chain of Rocks Canal and west of Horseshoe Lake, in the southwestern portion of Madison County (Reference 4; Reference 5).

The facility is bordered by the Norfolk and Western Railroad lines to the east and south, residential areas to the west, and residential areas, 23rd Street and property occupied by the Illinois American Water Company to the north (Reference 14, page 3; Reference 15, page 1; Figure 2-3). Operations at the facility began prior to 1920 (Reference 67, page 415), with Midland Creosoting Company acquiring the property south of 22nd Street (from F.G. Niedringhaus, et al) in 1921 (Reference 16, page 2). The property north of 22nd Street was acquired by Midland Creosoting Company in 1926 from Geo. W. Niedringhaus, et al (Reference 16, pages 3-4) and was used as their lumber storage yard (Reference 17). Midland Creosoting Company conveyed and warranted their holdings, by Warranty Deed, to The Jennison-Wright Corporation on January 29, 1940 (Reference 16, pages 6-8). The Jennison-Wright Corporation operated at the site until September 29, 1981, when the property was acquired by 2-B-J.W., Inc. (Reference 16, pages 9-28). The Jennison-Wright Corporation changed its name to J.W. Liquidating Corporation and, after settling outstanding liabilities, distributed the remaining assets to their shareholders (Reference 14, page 3). After acquiring the property, 2-B-J.W., Incorporated, an Ohio Corporation (Reference 16, page 9), changed its name to Jennison-Wright Corporation (Reference 14, page 3). Operations at the site continued until Jennison-Wright Corporation filed for Chapter 11 Bankruptcy in November 1989 (Reference 14, page 3) with an auction held in August of 1990 to sell equipment and other auctionable items.

The Jennison-Wright Corporation occupies a triangular-shaped facility that is split by 22nd Street, creating a north and south part (see Figure 2-3). The north portion or treated-tie storage area, has approximately eleven acres of land (Reference 11, parcel 001) that was used for tie trimming, treated-tie off-loading and treated-tie storage (Reference 18, page 5; Reference 19, page 44). The facility's process areas occupied the majority of the facility south of 22nd Street, treating wood products (railroad ties and wood block flooring) with pentachlorophenol, creosote and zinc naphthenate (Reference 20, page 15). Creosote was used for treating wood products from the beginning of operations until 1989 (Reference 19, pages 13 & 16), pentachlorophenol was used from 1974 until 1985 (Reference 21, page 4) and zinc naphthenate was used from 1985 until 1989 (Reference 20, page 15). Jennite, an asphalt sealer product composed of coal tar, pitch, clay and water, was also manufactured on the south portion of the facility (Reference 14, page 5). The asphalt sealer process began in the early 1960's (Reference 19, page 17) and continued until the summer of 1986, when Jennison-Wright Corporation sold the Jennite process to Neyra Industries (Reference 14, page 5). Neyra Industries also leased a portion of the Jennison-Wright facility where the Jennite process equipment was located (Reference 14, page 5). Neyra Industries continued operations in the southeastern portion of the Jennison-Wright facility until Jennison-Wright filed for bankruptcy in 1989.

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The Jennison-Wright Corporation site does not fall within the jurisdiction of the Atomic Energy Act (AEA) (Reference 22), the Uranium Mill Tailings Radiation Control Act (UMTRCA) (Reference 22) or the Federal Insecticide,

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Fungicide and Rodenticide Act (FIFRA) (Reference 23). ~~In addition, no further action at the Jennison-Wright Corporation facility will be taken by the Resource Conservation and Recovery Act (RCRA) program (Reference 24).~~ 2-2-88  
p. 22  
S. 1003  
4/8/88

According to Illinois EPA files, the Jennison-Wright Corporation did not file a RCRA Part A application for any of the disposal activities at the site (Reference 21, page 6-7). However, a RCRA Closure Application was submitted to the Illinois EPA on November 22, 1985 (Reference 18), with the intention of closing all the hazardous waste management units at the Granite City plant (Reference 18, page 14). The RCRA Closure plan was approved by the Illinois EPA on May 23, 1986, after additional information was submitted in March of 1986 (Reference 25, page 1). However, the facility filed for bankruptcy (Reference 14, page 3) before closing any of the areas detailed in the RCRA Closure plan approval letter (Reference 25). The Jennison-Wright Corporation, as evidenced by the bankruptcy filing, has demonstrated an inability to pay for a clean-up at their Granite City, Illinois facility. Therefore, no further action will be taken by the RCRA program (Reference 24).

The Illinois Environmental Protection Agency's Pre-Remedial Program was tasked by Region V, U.S. EPA, to conduct a CERCLA Screening Site Inspection and a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation site. The CERCLA Screening Site Inspection was conducted on November 29, 1988 (Reference 26) and the CERCLA Expanded Site Inspection (Reference 27) was conducted on July 30-31, 1991. In order to characterize potential sources, targets and/or receptors at the site, samples of wastes, groundwater and soils were collected during these inspections. The samples were analyzed for the Target Compound List compounds by Illinois EPA analytical laboratories and by an Illinois EPA Contract Lab Program laboratory. All samples were analyzed according to U.S. EPA Contract Laboratory Program Scope of Work OLM01.8 for organic analytes and ILM01.0 for inorganic analytes. All Quality Assurance and documentation procedures required by Scopes of Work were followed. The data packages prepared by the laboratories were reviewed by the Illinois EPA's Quality Assurance Section for compliance with the Scopes of Work (Reference 28, Reference 29). The data was validated according to the U.S. EPA "National Functional Guidelines for Organic Data Review" and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses". Where appropriate, analytical results were qualified as required by the Functional Guidelines.

Nine separate sources have been identified and used to define the Jennison-Wright Corporation site in Granite City, Illinois. The nine sources consist of 1) above ground railroad tank car 2) buried railroad tank car 3) storage tank #1 4) storage tank #2 5) Jennite lagoon 6) 22nd Street lagoon 7) asbestos pile 8) contaminated soils (residential areas) 9) contaminated soils (plant property). The migration pathways evaluated in this scoring package are the Air Pathway and the Soil Exposure Pathway.

Nine additional sources related to site activities will not be evaluated because of insufficient data on the nature of the contaminants contained within the sources. Three of the nine sources are located on the north portion of the Jennison-Wright Corporation facility and consist of a waste pile of sawdust and soil, a waste pile of concrete, and additional contaminated soils not included in the residential and plant property areas. The south portion of the Jennison-Wright Corporation facility has six sources consisting of a waste pile of treated wood blocks, a former oil/water separator pit, a former pit below the creosote cylinders, additional contaminated soils not included in the residential and plant

property areas, smokestacks, and drums currently located within the green warehouse.

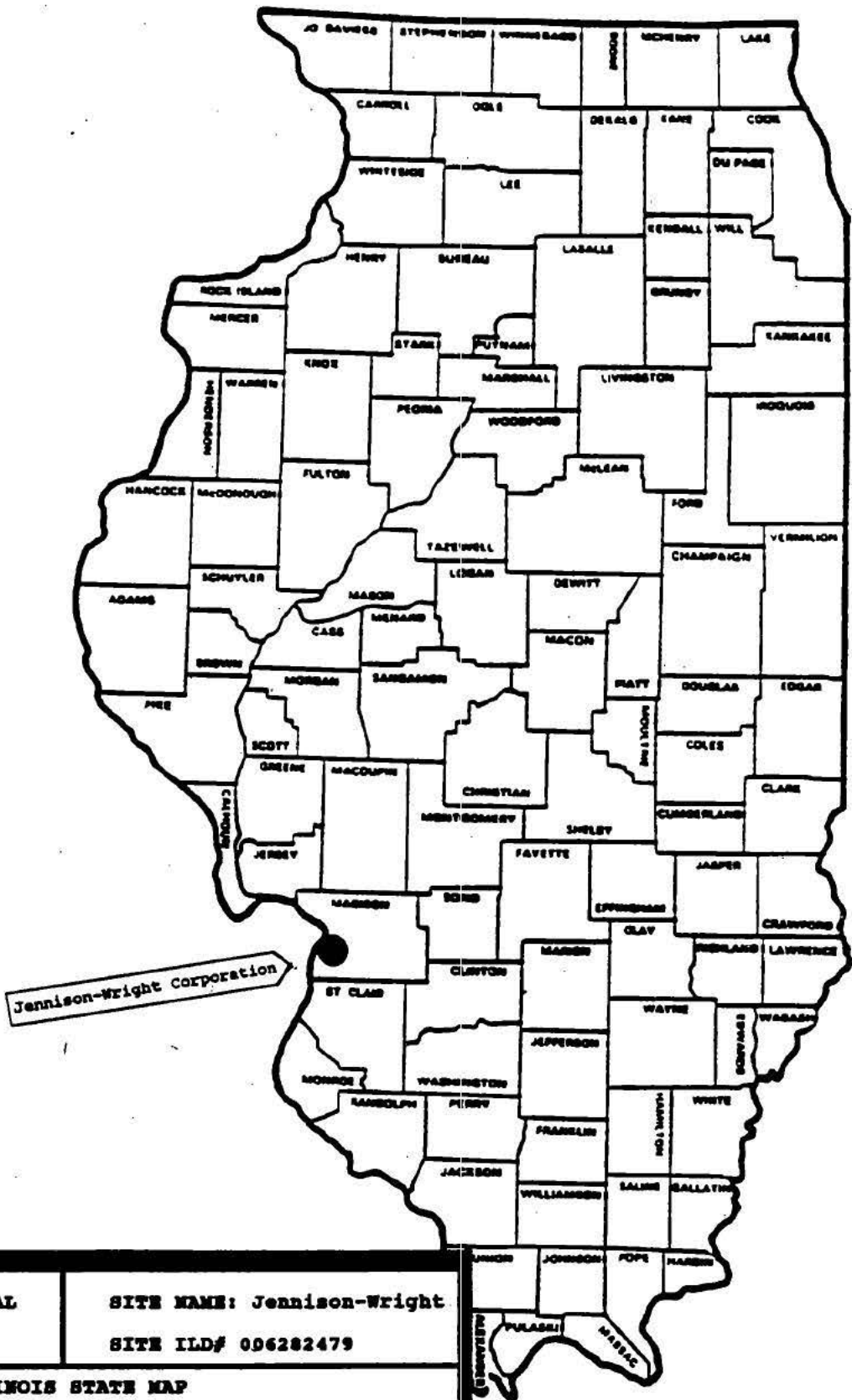
*2. from  
this no  
proceed  
description  
of sources*

Prior to the bankruptcy liquidation auction held at the facility in August of 1990, the Jennison-Wright facility remained virtually the same since the CERCLA Screening Site Inspection conducted by the Illinois EPA in November of 1988. After August 1990 and prior to May 4, 1992, the items sold during the auction and the other salvageable items left after the auction (scrap metal, wood, etc.), were removed from the facility. After May 4, 1992, a consultant hired by the Illinois EPA to secure portions of the site, began work on-site. The work completed included: the removal of 22 cubic yards of asbestos-containing material from the site, the staging of 121 drums in an on-site building, the pumping of 1300 gallons of cresol contaminated water from three open tanks into an on-site storage tank, the removal of approximately 20 cubic yards of material from the Jennite lagoon area to the three open tanks, the covering of the three tanks with a geomembrane material and the securing of the building containing the 121 drums (Reference 30, page 6). No further response actions have been conducted since May of 1992.

Figures 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8 and 2-9 depict facility location, source area locations, sample locations and facility features of the Jennison-Wright facility. Appendices A, B, C and D are maps identifying a four mile radius surrounding the Jennison-Wright Corporation facility and a map depicting residential soil sample locations.

*Not needed since some of this information is  
included with reference list.*

**FIGURE 2-1  
GENERAL LOCATION**



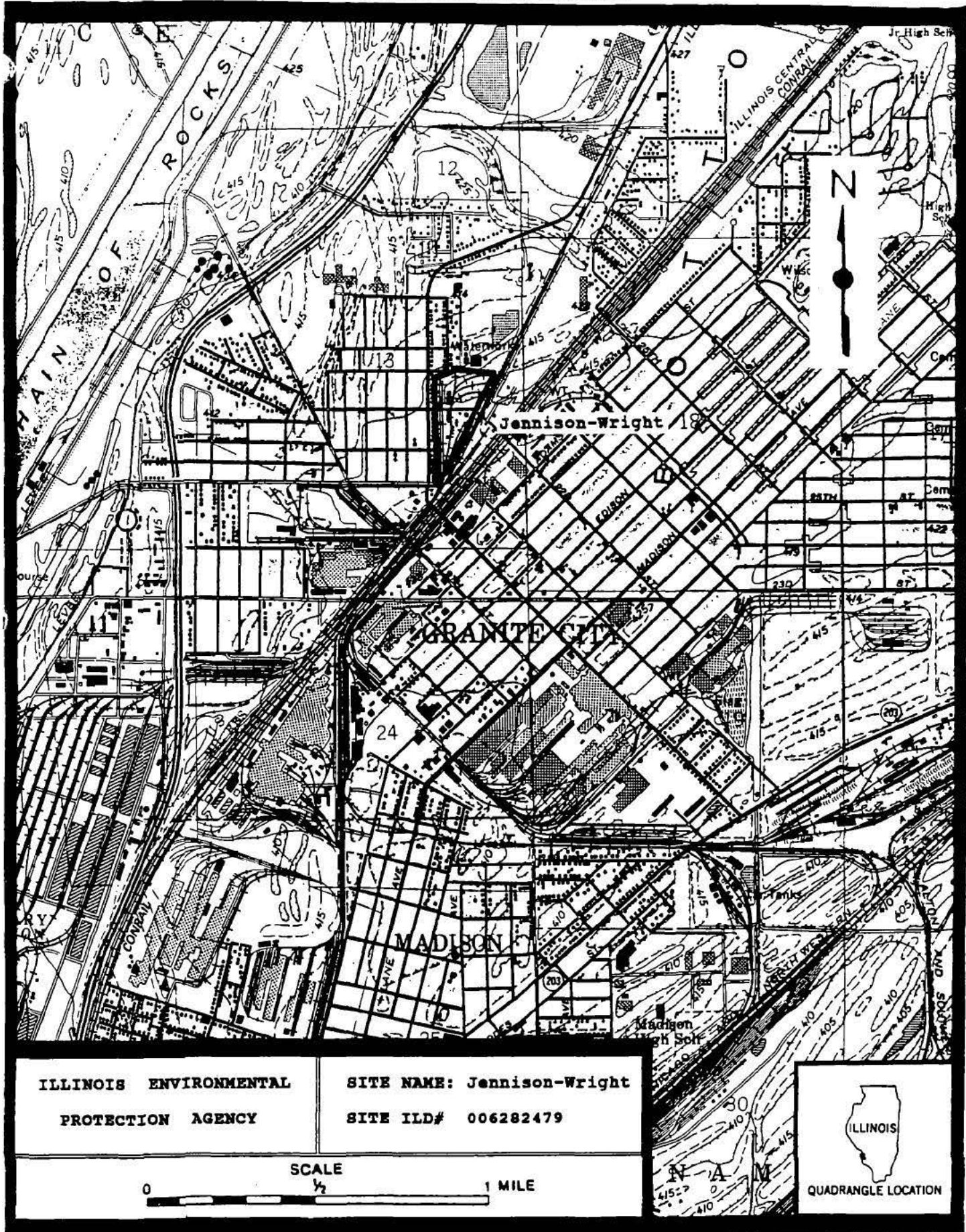
ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

SITE NAME: Jennison-Wright  
SITE ILD# 096282479

ILLINOIS STATE MAP

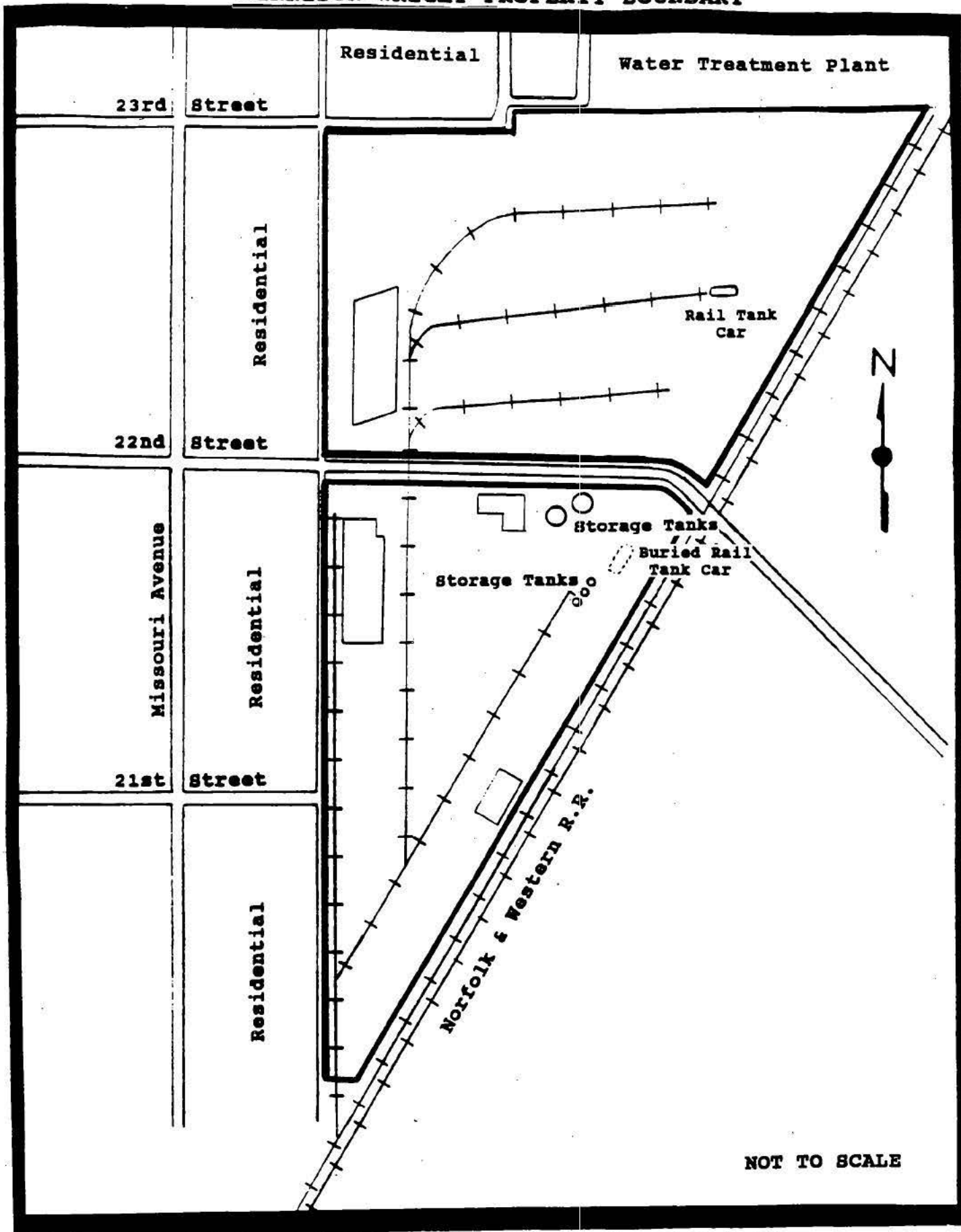
LEGEND: ● Site Location

FIGURE 2-2  
TOPOGRAPHIC RELIEF



Source: USGS, Granite City, IL-MO Quadrangle 7.5 Minute Series, Photorevised 1982

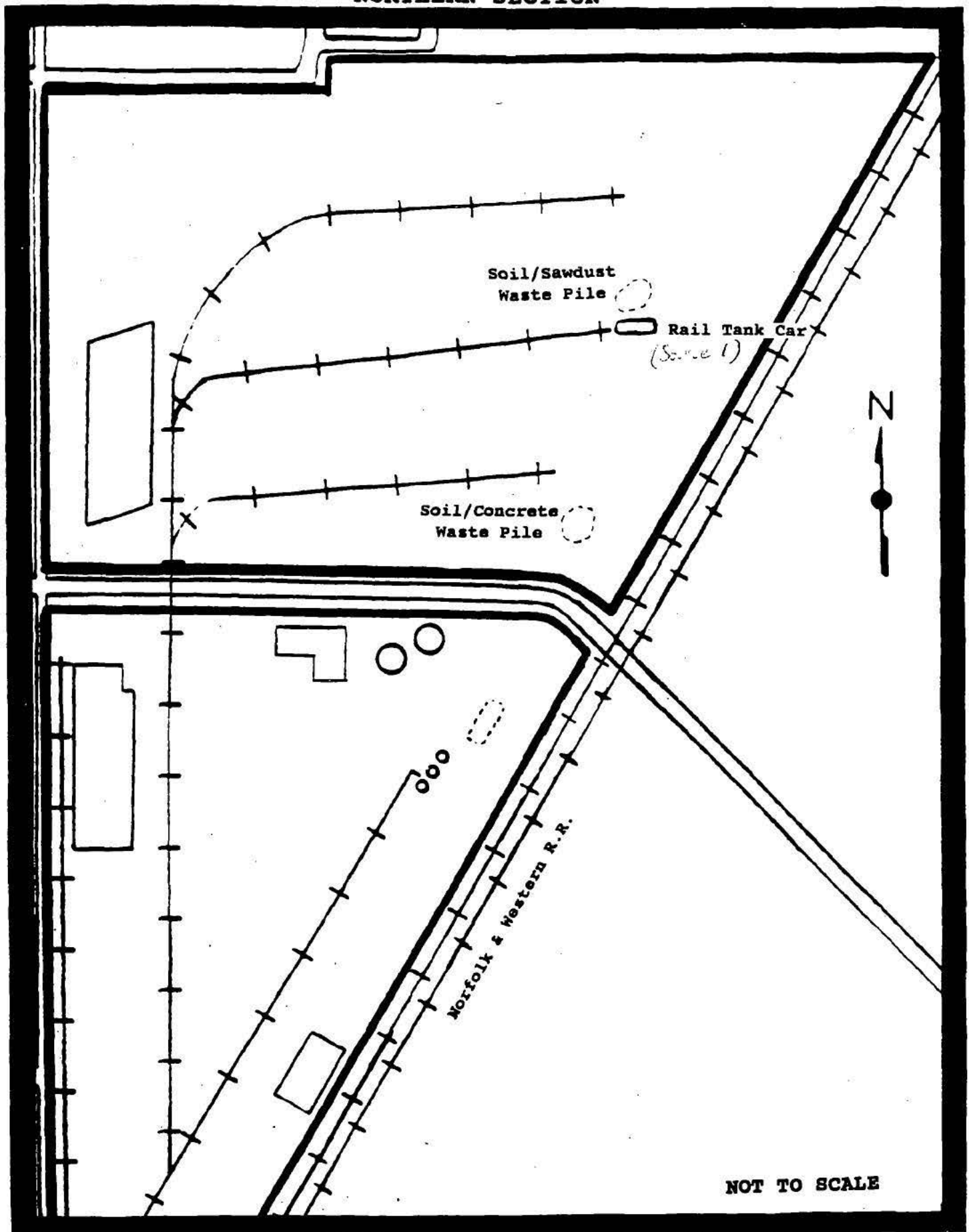
FIGURE 2-3  
JENNISON-WRIGHT PROPERTY BOUNDARY



Source: Aerial photograph, 1988, Illinois Department of Transportation



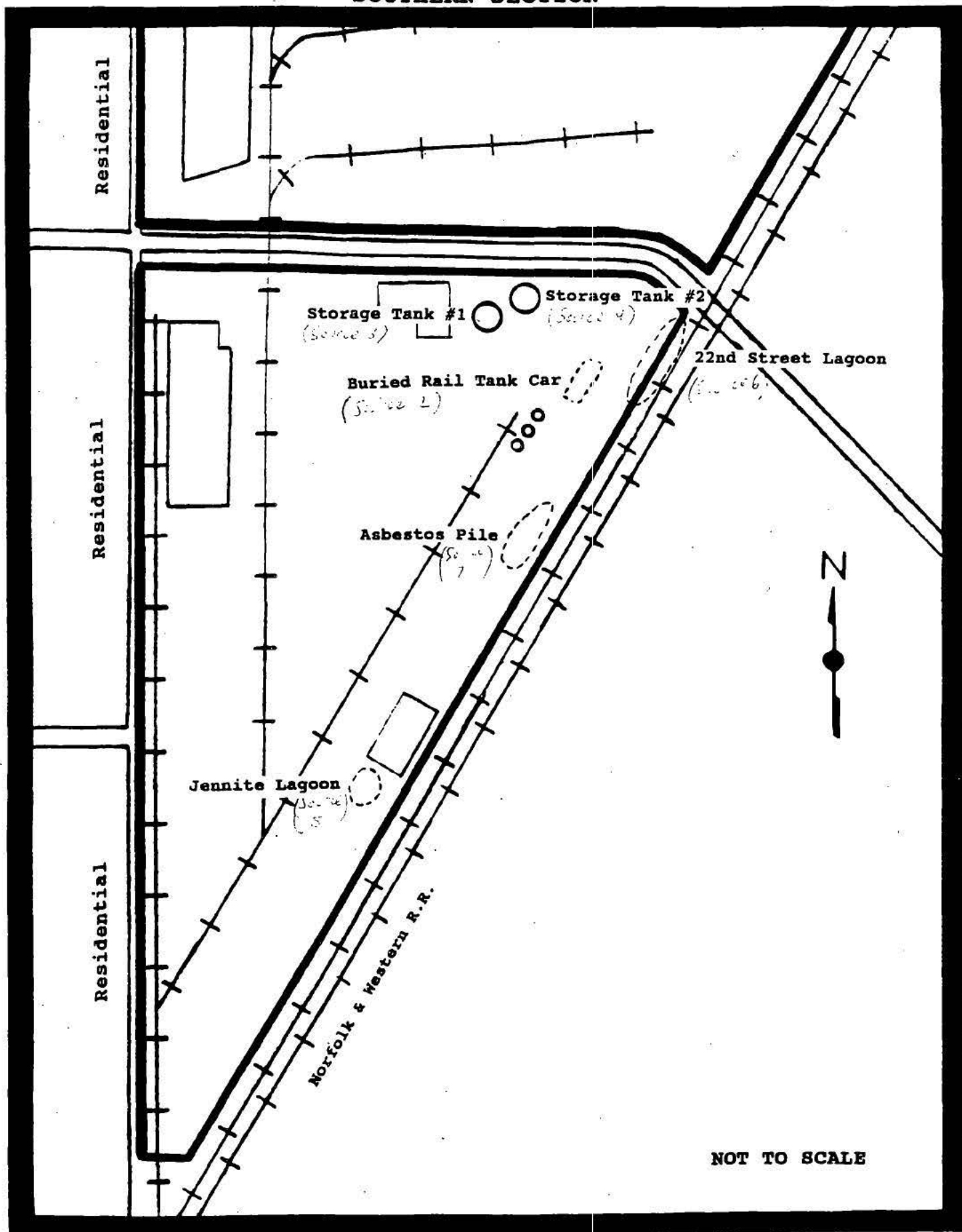
FIGURE 2-4  
NORTHERN SECTION



Source: Aerial photograph, 1988, Illinois Department of Transportation

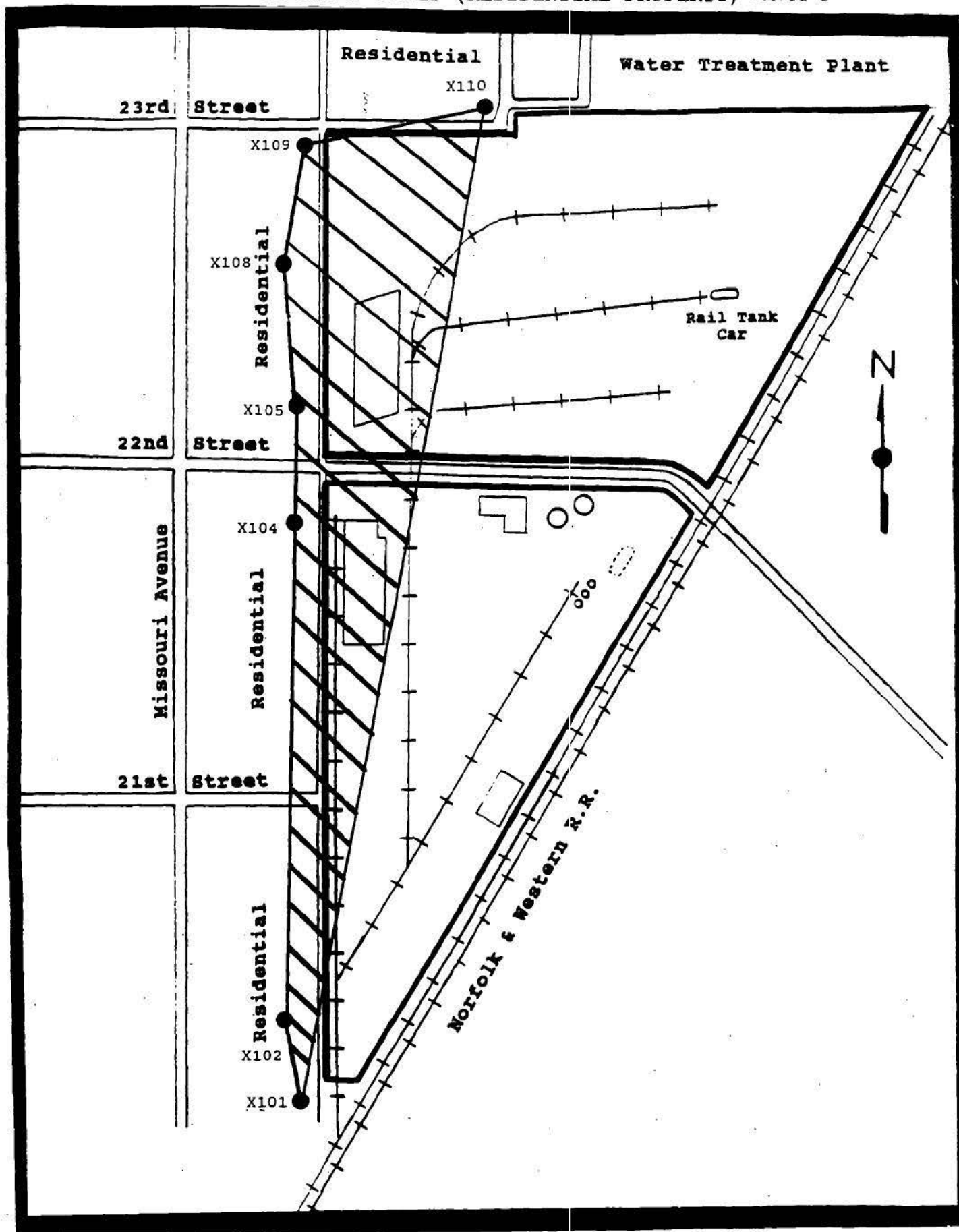


FIGURE 2-5  
SOUTHERN SECTION



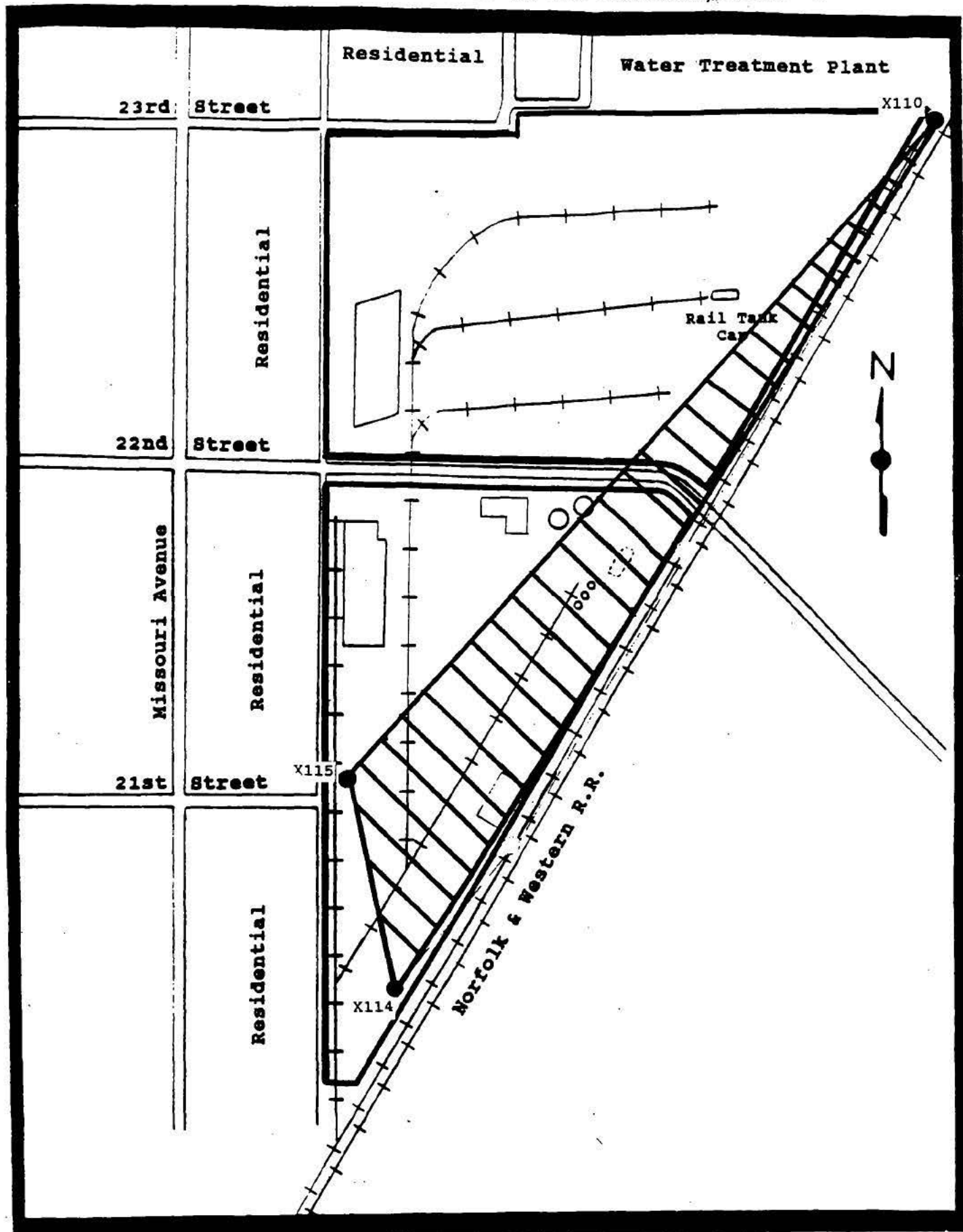
Source: Aerial photograph, 1988, Illinois Department of Transportation

FIGURE 2-6  
CONTAMINATED SOILS (RESIDENTIAL PROPERTY) *Source 8*



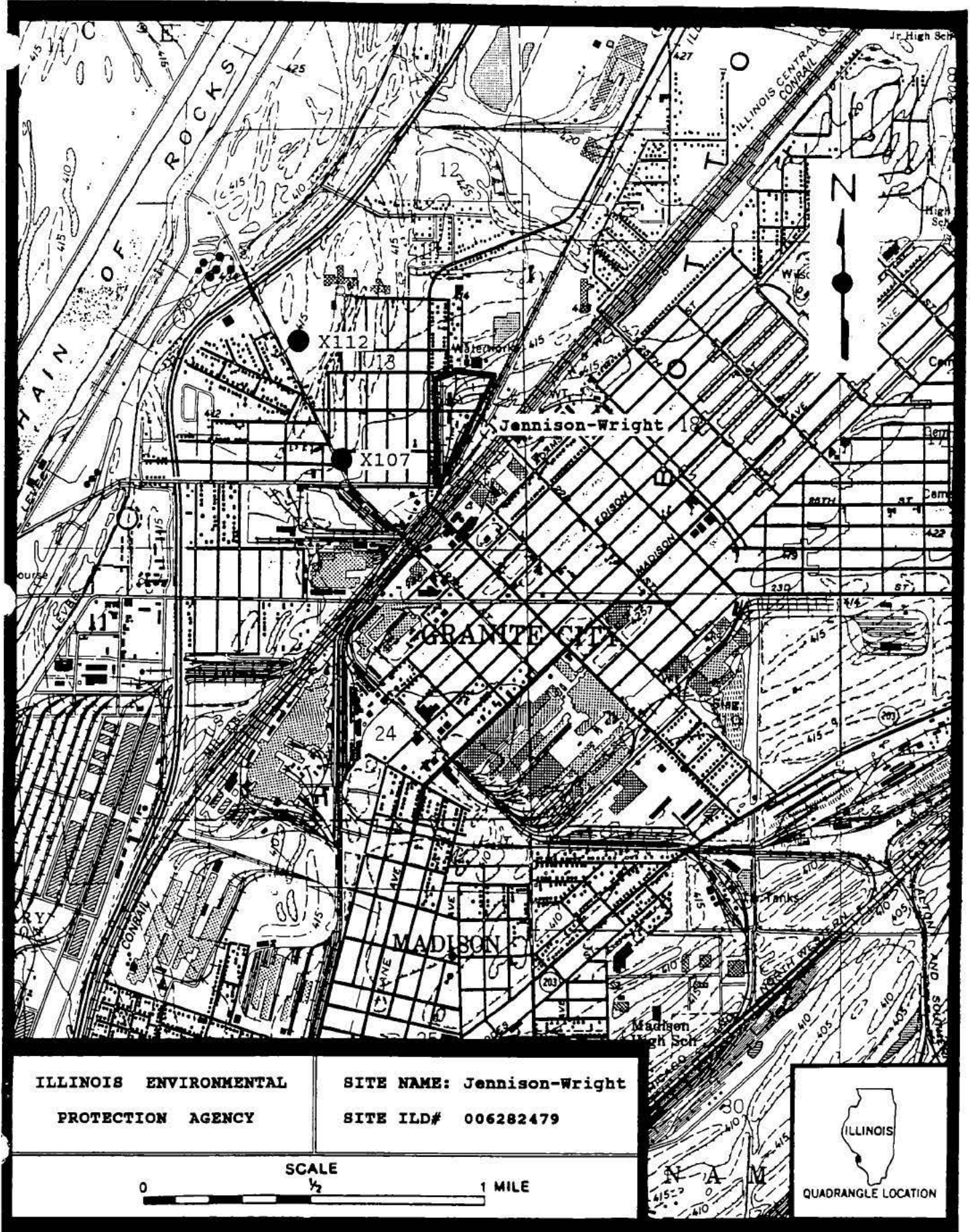
Source: Aerial photograph, 1988, Illinois Department of Transportation

FIGURE 2-7  
CONTAMINATED SOILS (PLANT PROPERTY) (Source 9)



Source: Aerial photograph, 1988, Illinois Department of Transportation

FIGURE 2-8  
BACKGROUND LOCATIONS



Source: USGS, Granite City, IL-MO quadrangle 7.5 Minute Series, Photorevised 1982

**Number of the source:** 1

**Name and description of the source:** Above Ground Railroad Tank Car. (The first waste source identified at the Jennison-Wright Corporation facility is a 12,000 gallon above ground railroad tank car (Reference 31) located on the north portion of the facility (Reference 15, page 1; Figure 2-4). The railroad tank car contains a black-dark brown liquid and sludge (Reference 27, page 8-9). The railroad tank car has been in this location at least since June of 1978 (Reference 32). *More to Tank Car*

On July 31, 1991, sample number X118 was collected from the above ground railroad tank car as part of the CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility (Reference 27, pages 8-9). In the analysis of the sample, the above ground railroad tank car was shown to contain a number of volatile organic compounds ranging from 22,000 ug/kg to 110,000 ug/kg (parts per billion), semi-volatile organic compounds ranging from 15,000,000 ug/kg to 280,000,000 ug/kg and concentrations of mercury at 230 ug/kg (Reference 33, pages 113-118).

**Location of the source, with reference to a map of the site:** Source 1, the above ground railroad tank car, is located within the northern portion of the Jennison-Wright property, west of the fenceline and the Norfolk and Western railroad tracks (Reference 15, page 1; Figure 2-4).

**Containment**

**Gas release to air**

Source 1 is an above ground leaking railroad tank car located in an open area of the facility with no windbreaks or other structures to protect it from the weather (Reference 15, page 1; Reference 31). There is no evidence of a biogas release and no gas collection/treatment system functioning, regularly inspected, maintained or completely covering the railroad tank car was observed (Reference 15, page 1). No active fire within the railroad tank car was observed (Reference 15, page 1).

Based on the lack of containment or cover, and the presence of hazardous substances in the railroad tank car, the gas release to air has been evaluated for Source 1. *What value?*

**Particulate release to air**

The presence of a particulate hazardous substance in this source has not been documented since the tank car contains only liquids and sludges covered by liquids (Reference 27, page 8), therefore, the particulate release to air for Source 1 has not been evaluated.

**Release to ground water**

Not Evaluated (NE)

**Release via overland migration and/or flood**

NE

#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected a black-dark brown liquid and sludge (Reference 27, page 8-9) from inside the above ground railroad tank car. Analytic results from sample X118 (Reference 33, pages 113-118) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>References</u>
7/31/91	Benzene	22,000	27, 29, 33
	Toluene	40,000	27, 29, 33
	Ethylbenzene	34,000	27, 29, 33
	Xylene	110,000	27, 29, 33
	Naphthalene	280,000,000	27, 29, 33
	2-Methylnaphthalene	42,000,000 J	27, 29, 33
	Acenaphthene	70,000,000	27, 29, 33
	Dibenzofuran	47,000,000 J	27, 29, 33
	Fluorene	60,000,000 J	27, 29, 33
	Phenanthrene	200,000,000	27, 29, 33
	Anthracene	25,000,000 J	27, 29, 33
	Fluoranthene	98,000,000	27, 29, 33
	Pyrene	63,000,000	27, 29, 33
	Benzo(a)anthracene	15,000,000 J	27, 29, 33
	Chrysene	18,000,000 J	27, 29, 33
	Mercury	230	27, 29, 33

J - indicates the concentration is an estimated value.

**2.4.2. Hazardous Waste Quantity**

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the railroad tank car is known and has been used to calculate the Hazardous Waste Quantity Value for Source 1.

**2.4.2.1.1. Hazardous Constituent Quantity**

Not Evaluated (NE)

**2.4.2.1.2. Hazardous Wastestream Quantity**

NE

**2.4.2.1.3. Volume**

Source 1, the above ground railroad tank car, is located on the north side of the Jennison-Wright Corporation facility (Figure 2-4) and according to an aerial photograph, has been located in this area since 1978 (Reference 32). The exact use of the railroad car is undetermined, but the volume of the railroad tank car was documented, in a 1991 telephone conversation with a former plant manager, as containing 12,000 gallons (Reference 31).

The assigned volume value for Source 1 was calculated by first converting the overall tank capacity (12,000 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculation, the Volume Assigned Value for Source 1, the above ground railroad tank car, is 24.

12,000 gallons / 200 gallons per cubic yard = 60 cubic yards

HWQ = 60 cubic yards / 2.5 = 24

Dimension of source (yd<sup>3</sup> or gallons): 60 cubic yards

References(s): 1, 31

Volume Assigned Value: 24

**2.4.2.1.4. Area**

NE

**2.4.2.1.5. Source Hazardous Waste Quantity Value**

Source Hazardous Waste Quantity Value: 24



Number of the source: 2

Name and description of the source: Buried Railroad Tank Car. The second waste source identified at the Jennison-Wright Corporation facility is a 12,000 gallon buried railroad tank car (Reference 31) located on the south portion of the facility (Reference 15, page 2; Figure 2-5). The railroad tank car was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31) and has been in this location since 1974 (Reference 34). Even though a letter from the Manager of Governmental Affairs for the Jennison-Wright Corporation indicates the tank was emptied, cleaned and a steel plate was placed on top, a sample from the buried railroad tank car was collected in July 1991 (Reference 27, page 8) and consisted primarily of a thick black sludge (Reference 27, page 8). The sample was collected by removing a chunk of concrete that was situated over the opening, and dipping a decontaminated dip sampler into the tank (Reference 27, page 8) to obtain the sample.

On July 31, 1991, sample number X116 was collected from the buried railroad tank car during the CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility (Reference 27, page 8). In the analysis of the sample, the buried railroad tank car was shown to contain volatile organic compounds ranging from 120 ug/kg to 2200 ug/kg (parts per billion), semi-volatile organic compounds ranging from 94,000 ug/kg to 1,200,000 ug/kg and concentrations of mercury at 210 ug/kg (Reference 33, pages 98-103).

Location of the source, with reference to a map of the site: Source 2, the buried railroad tank car, is located along the eastern edge of the south portion of the Jennison-Wright property, west of the fence boundary (Reference 15, page 2; Figure 2-5).

#### Containment

##### Gas release to air

Source 2 is a buried railroad tank car that has less than one (1) foot of uncontaminated exposed soil cover over the tank (Reference 15, page 2) and no vegetation covering the surface (Reference 15, page 2).

Based on the lack of containment or cover, and the presence of hazardous substances in the buried railroad tank car, the gas release to air has been evaluated for Source 2. *What value was given?*

##### Particulate release to air

The presence of a particulate hazardous substance in this source has not been documented since the tank car contains only liquids and sludges covered by liquids (Reference 27, page 8), therefore, the particulate release to air for Source 2 has not been evaluated.

##### Release to ground water

NE

##### Release via overland migration and/or flood

NE



#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected a thick black sludge (Reference 27, page 8) from inside the buried railroad tank car. Analytic results from sample X116 (Reference 33, pages 98-103) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>Reference</u>
7/31/91	Benzene	120	27, 29, 33
	Toluene	470	27, 29, 33
	Ethylbenzene	280	27, 29, 33
	Xylene	2,200	27, 29, 33
	Naphthalene	170,000	27, 29, 33
	2-Methylnaphthalene	220,000	27, 29, 33
	Acenaphthene	190,000	27, 29, 33
	Dibenzofuran	110,000	27, 29, 33
	Fluorene	190,000	27, 29, 33
	Pentachlorophenol	190,000 J	27, 29, 33
	Phenanthrene	640,000	27, 29, 33
	Anthracene	190,000	27, 29, 33
	Fluoranthene	1,200,000	27, 29, 33
	Pyrene	1,100,000	27, 29, 33
	Benzo(a)anthracene	240,000	27, 29, 33
	Chrysene	440,000	27, 29, 33
	Benzo(b)fluoranthene	280,000	27, 29, 33
	Benzo(k)fluoranthene	170,000	27, 29, 33
	Benzo(a)pyrene	120,000	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	130,000	27, 29, 33
	Benzo(g,h,i)perylene	94,000	27, 29, 33
	Mercury	210	27, 29, 33

J - indicates the concentration is an estimated value.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the railroad tank car is known and has been used to calculate the Hazardous Waste Quantity Value for Source 2.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

Source 2, the buried railroad tank car, is located on the south side of the Jennison-Wright Corporation facility (Figure 2-5) and according to an aerial photograph (Reference 35) and a letter from the Manager of Governmental Affairs for Jennison-Wright Corporation (Reference 34), has been located in this area since 1974. The buried railroad tank car was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 34) and, as documented in a 1991 telephone conversation with a former plant ~~manger~~<sup>manager</sup>, has a capacity of 12,000 gallons (Reference 31).

The assigned volume value for Source 2 was calculated by first converting the overall tank capacity (12,000 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculation, the Volume Assigned Value for Source 2, the buried railroad tank car, is 24.

12,000 gallons / 200 gallons per cubic yard = 60 cubic yards

HWQ = 60 cubic yards / 2.5 = 24

Dimension of source (yd<sup>3</sup> or gallons): 60 cubic yards

References(s): 1, 31

Volume Assigned Value: 24

2.4.2.1.4. Area

NE

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 24

Number of the source: 3

Name and description of the source: Storage Tank #1. (The third source identified at the Jennison-Wright Corporation facility is the westernmost storage tank of the two storage tanks located just south of 22nd Street (Figure 2-5). Reference 31, Reference 36 (designated as tank #8 on page 7) and Reference 37 (tank #8) indicate that storage tank #1 contains from 158,760 gallons to 160,000 gallons. However, volume calculations completed on the tank indicate the tank has a storage capacity of 159,608 gallons (Reference 38). Field observations made during the CERCLA Expanded Site Inspection indicate that the storage tank contains a dark brown to black sludge (Reference 27, pages 6-7) and has been on-site at least since 1955 (Reference 39). *Move to End Line*

On July 31, 1991, sample number X113 was collected from the above ground storage tank as part of the CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility (Reference 27, pages 6-7). In the analysis of the sample, storage tank #1 was shown to contain volatile organic compounds ranging from 92,000 ug/kg to 280,000 ug/kg (parts per billion), semi-volatile organic compounds ranging from 940,000 ug/kg to 110,000,000 ug/kg, cadmium at 5,000 ug/kg and mercury at 3,300 ug/kg (Reference 33, pages 77-85).

Location of the source, with reference to a map of the site: Storage tank #1 is located on the south portion of the Jennison-Wright facility, just south of 22nd Street (Reference 15, pages 2-3, Figure 2-5).

#### Containment

##### **Gas release to air**

The storage tank #1 source is a leaking above ground storage tank located in an open area with no windbreaks, structures or other containment to protect it from the weather (Reference 15, pages 2-3). There is no evidence of biogas release and no gas collection/treatment system functioning, regularly inspected, maintained or completely covering the source (Reference 15, page 3). No active fire within the above ground storage tank was observed (Reference 15, page 3)

Based on the lack of containment or cover, and the presence of hazardous substances in the storage tank, the gas release to air has been evaluated for Source 3. *What Value?*

##### **Particulate release to air**

The presence of a particulate hazardous substance in this source has not been documented since the storage tank contains only liquids and sludges covered by liquids (Reference 27, pages 6-7), therefore, the particulate release to air for Source 3 has not been evaluated.

##### **Release to ground water**

NE

##### **Release via overland migration and/or flood**

NE

#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected a dark brown to black sludge (Reference 27, pages 6-7) from inside the westernmost above ground storage tank. Analytic results from sample X113 (Reference 33, pages 77-85) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>Reference</u>
7/31/91	Benzene	150,000	27, 29, 33
	Toluene	180,000	27, 29, 33
	Ethylbenzene	92,000	27, 29, 33
	Xylene	280,000	27, 29, 33
	Phenol	3,200,000 J	27, 29, 33
	2-Methylphenol	940,000 J	27, 29, 33
	Naphthalene	110,000,000 D	27, 29, 33
	2-Methylnaphthalene	20,000,000	27, 29, 33
	Acenaphthylene	2,000,000 J	27, 29, 33
	Acenaphthene	31,000,000	27, 29, 33
	Dibenzofuran	23,000,000	27, 29, 33
	Fluorene	35,000,000	27, 29, 33
	Phenanthrene	97,000,000 D	27, 29, 33
	Anthracene	85,000,000	27, 29, 33
	Fluoranthene	46,000,000	27, 29, 33
	Pyrene	31,000,000	27, 29, 33
	Benzo(a)anthracene	8,600,000	27, 29, 33
	Chrysene	11,000,000	27, 29, 33
	Benzo(b)fluoranthene	3,200,000 J	27, 29, 33
	Benzo(k)fluoranthene	3,800,000 J	27, 29, 33
	Benzo(a)pyrene	3,900,000	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	1,800,000 J	27, 29, 33
	Benzo(g,h,i)perylene	1,700,000 J	27, 29, 33
	Cadmium	5,000	27, 29, 33
	Mercury	3,300	27, 29, 33

J - indicates the concentration is an estimated value.

D - indicates the sample was diluted.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of storage tank #1 is known and has been used to calculate the Hazardous Waste Quantity Value for Source 3.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

Source 3, storage tank #1, is located on the south portion of the Jennison-Wright Corporation facility (Figure 2-5) and according to an aerial photograph, has been located in this area since 1955 (Reference 39). This above ground storage tank was used for the storage of sludge from the treatment of wood products (Reference 31) and volume calculations indicate the storage capacity of the tank at 159,608 gallons (Reference 38).

The assigned volume value for Source 3 was calculated by first converting the overall tank capacity (159,608 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculations, the Volume Assigned Value for Source 3, the above ground storage tank #1, is 319.216.

$159,608 \text{ gallons} / 200 \text{ gallons per cubic yard} = 798.04 \text{ cubic yards}$

$\text{HWQ} = 798.04 \text{ cubic yards} / 2.5 = 319.216$

Dimension of source (yd<sup>3</sup> or gallons): 798.04 cubic yards

References(s): 1, 38

Volume Assigned Value: 319.216

2.4.2.1.4. Area

NE

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 319.216

**Number of the source: 4**

**Name and description of the source:** Storage Tank #2. *more to end line* The fourth source identified at the Jennison-Wright Corporation facility is the easternmost storage tank located just south of 22nd Street (Figure 2-5). Reference 31, Reference 36 (designated as tank #9 on page 7) and Reference 37 indicate that storage tank #2 contains from 79,800 gallons to 160,000 gallons. However, volume calculations completed on the tank indicate the tank has a storage capacity of 159,608 gallons (Reference 38). Field observations made during the CERCLA Expanded Site Inspection indicate that the tank contains a dark brown liquid (Reference 27, page 8) and has been on-site at least since the 1940's (Reference 31).

On July 31, 1991, sample number X117 was collected from the above ground storage tank as part of the CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility (Reference 27, page 8). In the analysis of the sample, storage tank #2 was shown to contain volatile organic compounds ranging from 180,000 ug/kg to 600,00 ug/kg (parts per billion) and semi-volatile organic compounds ranging from 440,000 ug/kg to 89,000,000 ug/kg (Reference 33, pages 104-112).

**Location of the source, with reference to a map of the site:** Storage tank #2 is located just south of 22nd Street, on the south portion of the Jennison-Wright Corporation facility (Reference 15, page 2; Reference 31; Reference 37 [designated as tank #9]; Figure 2-5).

#### **Containment**

##### **Gas release to air**

The storage tank #2 source is a leaking above ground storage tank located in an open area with no windbreaks, structures or other containment to protect it from the weather (Reference 15, page 2-3). There is no evidence of biogas release and no gas collection/treatment system functioning, regularly inspected, maintained or completely covering the source (Reference 15, page 2-3). No active fire within the above ground storage tank was observed (Reference 15, page 2-3).

Based on the lack of containment or cover, and the presence of hazardous substances in the storage tank, gas release to air has been evaluated for Source 4. *lost valve.*

##### **Particulate release to air**

The presence of a particulate hazardous substance in this source has not been documented since the storage tank contains only liquids, therefore, the particulate release to air for Source 4 has not been evaluated.

##### **Release to ground water**

NE

##### **Release via overland migration and/or flood**

NE

#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected a dark brown liquid (Reference 27, page 8) from inside the above ground storage tank #2. Analytic results from sample X117 (Reference 33, pages 104-112) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>Reference</u>
7/31/91	Benzene	180,000	27, 29, 33
	Toluene	360,000	27, 29, 33
	Ethylbenzene	340,000	27, 29, 33
	Xylene	600,000	27, 29, 33
	Phenol	920,000	27, 29, 33
	2-Methylphenol	640,000	27, 29, 33
	4-Methylphenol	1,900,000	27, 29, 33
	2,4-Dimethylphenol	1,900,000	27, 29, 33
	Naphthalene	89,000,000 D	27, 29, 33
	2-Methylnaphthalene	14,000,000 JD	27, 29, 33
	Acenaphthylene	1,400,000	27, 29, 33
	Acenaphthene	23,000,000 D	27, 29, 33
	Dibenzofuran	14,000,000 JD	27, 29, 33
	Fluorene	19,000,000 JD	27, 29, 33
	Phenanthrene	61,000,000 D	27, 29, 33
	Fluoranthene	28,000,000 D	27, 29, 33
	Pyrene	21,000,000 D	27, 29, 33
	Benzo(a)anthracene	4,900,000 JD	27, 29, 33
	Chrysene	4,600,000 JD	27, 29, 33
	Benzo(b)fluoranthene	1,400,000 JD	27, 29, 33
	Benzo(k)fluoranthene	1,700,000	27, 29, 33
	Benzo(a)pyrene	2,900,000	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	560,000	27, 29, 33
	Benzo(g,h,i)perylene	440,000	27, 29, 33

J - indicates the concentration is an estimated value.

D - indicates the sample was diluted.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the above ground storage tank #2 is known and has been used to calculate the Hazardous Waste Quantity Value for Source 4.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

Source 4, storage tank #2, is located on the south portion of the Jennison-Wright Corporation facility (Figure 2-5) and according to a conversation with a former plant manager, has been located in this area since the 1940's (Reference 31). This above ground storage tank was used as part of the Oil/Water Separator process (Reference 31), with both creosote and pentachlorophenol wastes processed in the tank as part of a phased separation process (Reference 31). The storage tank #2 has a storage capacity of 159,608 gallons (Reference 38).

The assigned volume value for Source 4 was calculated by first converting the overall tank capacity (159,608 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculations, the Volume Assigned Value for Source 4, the above ground storage tank #2, is 319.216.

$159,608 \text{ gallons} / 200 \text{ gallons per cubic yard} = 798.04 \text{ cubic yards}$

$HWQ = 798.04 \text{ cubic yards} / 2.5 = 319.216$

Dimension of source (yd<sup>3</sup> or gallons): 798.04 cubic yards

References(s): 1, 38

Volume Assigned Value: 319.216

2.4.2.1.4. Area

NE

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 319.216



Number of the source: 5

Name and description of the source: Jennite Lagoon. The fifth source identified at the Jennison-Wright Corporation facility is the Jennite Lagoon, also referred to as the on-site sludge disposal pit (Reference 18, page 8; Reference 19, page 62; Reference 40, page 1), Area E (Reference 18, page 8), Jennite pit (Reference 14, page 7) and the pitch storage lagoon (Reference 21, page 5). This source is a partially buried/backfilled lagoon located on the eastern boundary in the south portion of the Jennison-Wright Corporation facility (Reference 14, page 7; Reference 15, page 3; Figure 2-5). The Jennite lagoon was used prior to 1973 (Reference 35) and up to 1978 (Reference 32) for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7). Jennison-Wright's attempts to fill the lagoon failed, because as soil was added to the lagoon the sludge level rose and waste began flowing off-site onto the nearby railroad company's property (Reference 40, page 1).

On November 29, 1988, sample number X108 was collected from the surface to 3 inches deep from the Jennite lagoon area (Reference 26, page 7) during the CERCLA Screening Site Inspection at the Jennison-Wright Corporation facility. In the analysis of the sample, the Jennite lagoon was shown to contain semi-volatile organic compounds ranging from 490 ug/kg to 44,000 ug/kg (parts per billion) (Reference 41, pages 73-79). The Jennite lagoon was also sampled by Woodward-Clyde Consultants as part of a privately financed Site Assessment prepared for the Jennison-Wright Corporation. The samples were collected from 4 to 6 feet and 14 to 16 feet deep on November 11, 1987 and December 16, 1987 and were shown to contain volatile organic compounds ranging from 2,600 ug/kg to 34,000 ug/kg (parts per billion) and semi-volatile organic compounds from 460 ug/kg to 4,200,000 ug/kg (Reference 42, pages 32-33, 93-96).

Location of the source, with reference to a map of the site: The Jennite lagoon is located along the eastern boundary fence, on the southeastern portion of the Jennison-Wright Corporation facility (Reference 14, page 7, Figure 2-5).

#### Containment

##### Gas release to air

The Jennite lagoon source is a partially backfilled lagoon that has less than 1 foot of uncontaminated soil cover and very little vegetative growth on the surface (Reference 15, page 3). No windbreaks, structures, gas collection/treatment system, or liner completely cover or protect the source (Reference 15, page 3; Reference 42, pages 138-139; Reference 43, pages 9-10).

Based on the lack of containment and cover, and the presence of hazardous substances in the Jennite lagoon, the gas release to air has been evaluated for Source 5. *See table*

##### Particulate release to air

The presence of a particulate hazardous substance in this source has not been documented, therefore, the particulate release to air has not been evaluated for Source 5.

##### Release to ground water

NE

##### Release via overland migration and/or flood

NE

#### 2.4.1 Hazardous Substances

In November of 1988, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 26, pages 1-8). During this inspection, the field investigation team collected a brown sandy soil with black streaks (Reference 26, page 7) from the Jennite Lagoon. Analytic results from sample X108 (Reference 41, pages 73-79) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>Reference</u>
11/29/88	Naphthalene	1,300 J	26, 28, 41
	2-Methylnaphthalene	490 J	26, 28, 41
	Fluorene	4,200 J	26, 28, 41
	Phenanthrene	28,000 J	26, 28, 41
	Anthracene	35,000 J	26, 28, 41
	Fluoranthene	44,000	26, 28, 41
	Pyrene	35,000 B	26, 28, 41
	Benzo(a)anthracene	14,000 J	26, 28, 41
	Chrysene	16,000 J	26, 28, 41
	Benzo(b)fluoranthene	7,000 J	26, 28, 41
	Benzo(a)pyrene	8,000 J	26, 28, 41

J - indicates the concentration is an estimated value.

B - indicates the compound was also detected in the blank.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. Therefore, the area of the Jennite lagoon has been used to calculate the Hazardous Waste Quantity Value for Source 5.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

NE

2.4.2.1.4. Area

The total estimated area of the Jennite lagoon is 2,270 square feet (Reference 44) and was measured using a planimeter and the 1973 aerial photograph of the site (Reference 35). The Jennite lagoon was used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

The assigned area value for Source 5 was calculated by dividing the area of the lagoon by the divisor for a surface impoundment (buried/backfilled), which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculations, the Area Assigned Value for Source 5, the Jennite Lagoon, is 174.61538.

$$\text{HWQ} = \text{area of lagoon } 2,270 \text{ square feet} / 13 = 174.61538$$

Area of source (ft<sup>2</sup>): 2,270

Reference(s): 1, 35, 44

Area Assigned Value: 174.61538

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 174.61538

**Number of the source:** 6

**Name and description of the source:** 22nd Street Lagoon. (The sixth source identified at the Jennison-Wright Corporation facility is the 22nd Street Lagoon, also referred to as the off-site disposal pit and Area G (Reference 18, page 10). This source is a partially buried/backfilled lagoon located on the eastern boundary in the south portion of the Jennison-Wright Corporation facility (Reference 14, page 7, Reference 15, page 3-4, Figure 2-5). Use of the 22nd Street lagoon began prior to 1955 (Reference 39) and continued until 1972 when the lagoon was filled in with dirt, bricks and other materials (Reference 14, page 7). The lagoon was used for the disposal of waste and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).)

On November 29, 1988, sample number X109 was collected from the surface to 3 inches deep from the 22nd Street lagoon area (Reference 26, page 7) during the CERCLA Screening Site Inspection at the Jennison-Wright Corporation facility. In the analysis of the sample, the Jennite lagoon was shown to contain semi-volatile organic compounds ranging from 200 ug/kg to 28,000 ug/kg (parts per billion) (Reference 41, pages 80-86).

**Location of the source, with reference to a map of the site:** The 22nd Street lagoon is located outside the fence along the eastern edge of the Jennison-Wright Corporation facility, in the northeast corner of the south portion of the property (Reference 15, page 3, Figure 2-5).

#### **Containment**

##### **Gas release to air**

The 22nd Street source is a partially buried/backfilled lagoon that has less than 1 foot of uncontaminated soil cover and very little vegetative growth on the surface (Reference 15, page 3). No windbreaks, structures, gas collection/treatment system, or liner completely cover or protect the lagoon (Reference 15, page 3; Reference 43, pages 7-8).

Based on the lack of containment and cover, and the presence of hazardous substances in the 22nd Street lagoon, the gas release to air has been evaluated for Source 6. *Containment not*

##### **Particulate release to air**

The presence of a particulate hazardous substance in this source has not been documented, therefore, the particulate release to air has not been evaluated for Source 6.

##### **Release to ground water**

NE

##### **Release via overland migration and/or flood**

NE

#### 2.4.1 Hazardous Substances

In November of 1988, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 26, pages 1-8). During this inspection, the field investigation team collected a brown sand with black streaks (Reference 26, page 7) from the 22nd Street Lagoon. Analytic results from sample X109 (Reference 41, pages 80-86) revealed the presence of the following hazardous substances.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Conc. (ug/kg)</u>	<u>Reference</u>
11/29/88	Naphthalene	2,700 J	26, 28, 41
	2-Methylnaphthalene	560 J	26, 28, 41
	Acenaphthylene	400 J	26, 28, 41
	Acenaphthene	420 J	26, 28, 41
	Dibenzofuran	2,000 J	26, 28, 41
	Fluorene	200 J	26, 28, 41
	Phenanthrene	12,000 B	26, 28, 41
	Anthracene	2,400 J	26, 28, 41
	Fluoranthene	24,000 B	26, 28, 41
	Pyrene	25,000 B	26, 28, 41
	Benzo(a)anthracene	14,000	26, 28, 41
	Chrysene	28,000	26, 28, 41
	Benzo(b)fluoranthene	21,000	26, 28, 41
	Benzo(k)fluoranthene	16,000	26, 28, 41
	Benzo(a)pyrene	14,000	26, 28, 41
	Indeno(1,2,3-cd)pyrene	21,000	26, 28, 41
	Dibenz(a,h)anthracene	3,500 J	26, 28, 41
	Benzo(g,h,i)perylene	23,000	26, 28, 41

J - indicates the concentration is an estimated value.  
B - indicates the compound was also found in the blank.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of the of the 22nd Street lagoon is known and has been used to calculate the Hazardous Waste Quantity Value for Source 6.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

NE

2.4.2.1.4. Area

The total estimated area of the 22nd Street Lagoon is 5,786 square feet (Reference 44) and was measured using a planimeter and the 1961 aerial photograph of the site (Reference 45). The 22nd Street Lagoon was used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

The assigned area value for Source 6 was calculated by dividing the area of the lagoon by the divisor for a surface impoundment (buried/backfilled), which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculations, the Area Assigned Value for Source 6, the 22nd Street Lagoon, is 445.13846

$$\text{HWQ} = \text{area of lagoon } 5,786.8 \text{ square feet} / 13 = 445.13846$$

Area of source (ft<sup>2</sup>): 5,786.8

Reference(s): 1, 44, 45

Area Assigned Value: 445.13846

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 445.13846

**Number of the source:** 7

**Name and description of the source:** Asbestos pile. (The seventh source identified at the Jennison-Wright Corporation facility is the asbestos pile. Asbestos-containing material was found on the ground, in the buildings and on pipes throughout the southern portion of the Jennison-Wright Corporation facility (Reference 30, page 9 & 16; Reference 46, page 4-6). Some of the asbestos may have been dislodged and moved from its original location during the dismantling and salvaging operations conducted after the 1990 auction and during illegal scavenging of the property.

On July 8, 1991, sample number 117 was collected from an area allegedly containing asbestos material (Reference 46, pages 6-7). In the analysis of the material, asbestos aniosite comprised between 30%-40% of the constituent make-up (Reference 46, page 4).

**Location of the source, with reference to a map of the site:** The asbestos pile was located primarily on the eastern part of the south portion of the Jennison-Wright Corporation facility (Figure 2-5).

**Containment**

**Gas release to air**

The presence of a gaseous hazardous substances in this source has not been documented, therefore the gaseous release to air has not been evaluated for Source 7.

**Particulate release to air**

The asbestos pile source was located on top of the ground surface with no soil covering the material (Reference 46, page 7). The asbestos material was not in containers, surrounded by windbreaks, covered by liquids or enclosed within structurally intact buildings (Reference 30, page 16: Reference 46, page 7).

Based on the lack of containment or cover material, and the presence of particulate hazardous substances in the pile, particulate release to air has been evaluated for Source 7. *Continued below*

**Release to ground water**

NE

**Release via overland migration and/or flood**

NE

**2.4.1 Hazardous Substances**

On July 8, 1991, the Illinois Environmental Protection conducted a sampling inspection at the Jennison-Wright Corporation site, to determine if the presence of asbestos existed on-site. During this inspection, the field investigation team collected a sample of fibrous material lying on the ground on the eastern portion of the facility's southern part (Reference 46, page 6-7). The amount of asbestos which was detected in the sample is presented below.

<u>Date of Sample</u>	<u>Hazardous Substance</u>	<u>Amount</u>	<u>Reference</u>
7-08-91	Asbestos	30%-40%	46



2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and volume is currently unavailable. The area of the asbestos pile is known and has been used to calculate the Hazardous Waste Quantity Value for Source 7.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

NE

2.4.2.1.4. Area

The area of the asbestos pile was measured during the sampling of the pile on July 8, 1991. The area of asbestos pile contamination was measured as 36 feet by 40 feet for a total area of 1440 square feet (Reference 46, page 7).

The assigned area value for Source 7 was calculated by dividing the area of the asbestos pile by the divisor for a pile, which is contained in Table 2-5 of the Hazard Ranking System (Reference 1, page 51591). Based on the calculations, the Area Assigned Value for Source 7, the asbestos pile, is 110.76923.

$$\text{HWQ} = 1440 \text{ square feet} / 13 = 110.76923$$

Area of source (ft<sup>2</sup>): 1440 square feet

Reference(s): 46

Area Assigned Value: 110.76923

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 110.76923

**Number of the source:** 8

**Name and description of the source:** Contaminated soils (residential areas) — The eighth source identified at the Jennison-Wright Corporation facility is an area of contaminated soils within residential areas, which lie west and north of the facility. The contaminated soil source located within the residential area, extends from the northern portion of the facility to the southern portion of the facility. This source encompasses approximately 121,892 square feet (Reference 27, pages 1-5; Reference 33, pages 5-64; Reference 47; Reference 48; Figure 2-6). The contaminated areas are at the same elevation or slightly higher than the on-site areas of the Jennison-Wright Corporation site (Reference 4).

On July 30, 1991, 11 soil samples were collected from areas north and west of the Jennison-Wright Corporation facility (Reference 27, pages 1-6) to determine if air and particulate emissions from the facility had adversely impacted residential soils. Ten soil samples were collected from residential backyards north and west of the Jennison-Wright Corporation facility (X101 thru X110) (Reference 27, 1-5) and one sample was collected from a nearby field to determine background concentrations within the area (X112) (Reference 27, page 6). The soil sample collected to represent background conditions within the area was collected from the same soil type (Reference 49, pages 69, 72-74, sheet number 95) and same depth as the residential soil samples (Reference 27:1-6). All of the samples collected during the CERCLA Expanded Site Inspection were collected from 1/2 inch to 6 inches below the surface (Reference 27:1-6).

**Location of the source, with reference to a map of the site:** The contaminated soils source is located immediately west and north of the Jennison-Wright Corporation facility and extends from the north side of the Jennison-Wright Corporation facility to the southwestern end of the Jennison-Wright facility (Reference 27, pages 1-6; Reference 33, pages 5-64; Reference 47; Reference 48; Figure 2-6).

#### **Containment**

##### **Gas release to air**

Contaminants documented to be present within Source 8, were found in the top 6 inches of soil (Reference 27, pages 1-6; Reference 33, pages 5-64).

Based on the lack of containment and cover, and the presence of gaseous hazardous substances in the contaminated soil source, the gas release to air has been evaluated for Source 8. *Containment value*

##### **Particulate release to air**

Contaminants documented to be present within Source 8, were found in the top 6 inches of soil (Reference 27, pages 1-6; Reference 33, pages 5-64).

Based on the lack of containment and cover, and the presence of particulate hazardous substances in the contaminated soil source, the particulate release to air has been evaluated for Source 8. *Value*

##### **Release to ground water**

NE

##### **Release via overland migration and/or flood**

NE

#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During the inspection, the field investigation team collected a total of 11 soil samples, including one sample collected to represent background conditions (Reference 27, pages 1-6; Reference 33, pages 5-64). During the CERCLA Expanded Site Inspection of July 30 and 31, 1991, the samples collected included X101 thru X110 in residential backyards and sample X112 was collected to determine background conditions (Reference 27, pages 1-6). Sample X112 was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-6) and in an area otherwise similar to samples collected in the contaminated areas, but not exposed to the Jennison-Wright Corporation facility (Figure 2-8). Analytic results from samples X101-X110 revealed the presence of the following hazardous substances.

Sample Number	Hazardous Substance	Conc. (ug/kg)	Ref. Conc. (ug/kg)	Ref. Conc.	
				Sample Number	Reference
X101	Fluoranthene	1200	770 U	X112	27, 29, 33
	Pyrene	850	770 U	X112	27, 29, 33
X102	Phenanthrene	2300	770 U	X112	27, 29, 33
	Fluoranthene	2900	770 U	X112	27, 29, 33
	Pyrene	2200	770 U	X112	27, 29, 33
	Benzo(a)anthracene	1500	770 U	X112	27, 29, 33
	Chrysene	1600	770 U	X112	27, 29, 33
	Benzo(b)fluoranthene	2200	770 U	X112	27, 29, 33
	Benzo(k)fluoranthene	1700	770 U	X112	27, 29, 33
	Benzo(a)pyrene	1400	770 U	X112	27, 29, 33
X103	Naphthalene	1400	770 U	X112	27, 29, 33
	2-Methylnaphthalene	2000	770 U	X112	27, 29, 33
X104	Phenanthrene	920	770 U	X112	27, 29, 33
	Fluoranthene	1200	770 U	X112	27, 29, 33
	Pyrene	810	770 U	X112	27, 29, 33
X105	Fluoranthene	1000	770 U	X112	27, 29, 33
	Pyrene	940	770 U	X112	27, 29, 33
	Benzo(b)fluoranthene	870	770 U	X112	27, 29, 33
X108	Phenanthrene	1400	770 U	X112	27, 29, 33
	Fluoranthene	1900	770 U	X112	27, 29, 33
	Pyrene	1700	770 U	X112	27, 29, 33
	Benzo(a)anthracene	900	770 U	X112	27, 29, 33
	Chrysene	940	770 U	X112	27, 29, 33
	Benzo(b)fluoranthene	1100	770 U	X112	27, 29, 33
	Benzo(k)fluoranthene	1100	770 U	X112	27, 29, 33
	Benzo(a)pyrene	970	770 U	X112	27, 29, 33
X109	Phenanthrene	1500	770 U	X112	27, 29, 33
	Fluoranthene	1700	770 U	X112	27, 29, 33
	Pyrene	1800	770 U	X112	27, 29, 33
	Benzo(a)anthracene	930	770 U	X112	27, 29, 33
	Chrysene	1000	770 U	X112	27, 29, 33
	Benzo(b)fluoranthene	1200	770 U	X112	27, 29, 33
	Benzo(k)fluoranthene	1000	770 U	X112	27, 29, 33
	Benzo(a)pyrene	1000	770 U	X112	27, 29, 33

X110	Phenanthrene	1200	770 U	X112	27, 29, 33
	Fluoranthene	1600	770 U	X112	27, 29, 33
	Pyrene	1400	770 U	X112	27, 29, 33
	Chrysene	1200	770 U	X112	27, 29, 33
	Benzo(b)fluoranthene	810	770 U	X112	27, 29, 33

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of observed soil contamination is known and has been used to calculate the Hazardous Waste Quantity value for Source 8.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

NE

2.4.2.1.4. Area

The total number of square feet of contaminated soils within Source 8 was estimated by first superimposing the peripheral points of documented contamination, determined during the July 1991 CERCLA Expanded Site Inspection (Reference 27, pages 1-9), onto a 1988 aerial photograph (Reference 47). Then using a Planix planimeter, the total area between these sampling points was calculated.

Once the total area between the sampling points was determined, the total area beneath any permanent structure was subtracted. The total number of square feet of contaminated soils within Source 8 is estimated to be 121,892 (Reference 48).

The area assigned value of 3.5850588 for Source 8 was derived by dividing the total estimated area of contamination by the area divisor for contaminated soils contained within Table 2-5 of the Hazard Ranking System (Reference 1, page 51591).

$$\text{HWQ} = 121,892 \text{ square feet} / 34,000 \text{ square feet} = 3.5850588$$

Area of source (ft<sup>2</sup>): 121,892

Reference(s): 1, 33, 47, 48

Area Assigned Value: 3.5850588

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 3.5850588

Number of the source: 9.

Name and description of the source: Contaminated soils (plant property). The ninth and final source identified at the Jennison-Wright Corporation facility is an area of contaminated soils within the plant property. The contaminated soil source located within the plant property, extends from the northeastern portion of the facility to the southern portion of the facility. This source encompasses approximately 172,268 square feet (Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 26, pages 6-8; Reference 41, pages 66-72, 87-93). The contaminated areas are the result of spills, leaks and drips from activities at the Jennison-Wright Corporation (Reference 65).

On July 31, 1991, during the CERCLA Expanded Site Inspection, two soil samples (X114 and X115) were collected from two areas on the south portion of the Jennison-Wright Corporation facility (Reference 27, page 7). These soil samples were collected from the surface to 3 inches deep (Reference 27, page 7) and were compared to background sample X112 (Reference 27, pages 5-6). The soil sample collected to represent background conditions within the area, was collected from the same soil type (Reference 49, pages 69, 72-74, sheet number 95) and the same soil depth as the on-facility soil samples (Reference 27, page 7). All samples collected during the CERCLA Expanded Site Inspection were collected from 1/2 inch to 6 inches below the surface (Reference 27, pages 5-7).

An additional soil sample was collected during the CERCLA Screening Site Inspection on November 29, 1988, but collected in the north portion of the Jennison-Wright Corporation facility. This soil sample (X110) was collected from the surface to 1 inch deep (Reference 26, pages 7-8) and was compared to background sample X107. The soil sample collected to represent background concentrations within the area, was collected from the same soil type (Reference 49, pages 69, 72-74, sheet number 95) and the same depth (Reference 26, page 6) as the on-facility soil samples.

Location of the source, with reference to a map of the site: The contaminated soils within the plant property extends from the northeastern portion of the Jennison-Wright Corporation facility to the southern portion (Reference 26, pages 6-8; Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 41, pages 66-72, 87-93; Figure 2-7).

#### Containment

##### Gas release to air

Contaminants documented to be present within Source 9, were found in the top 6 inches of soil (Reference 26, pages 6-8; Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 41, pages 66-72, 87-93).

Based on the lack of containment and cover, and the presence of gaseous hazardous substances in the contaminated soil source, the gas release to air has been evaluated for Source 9. *Containment value*

##### Particulate release to air

Contaminants documented to be present within Source 9, were found in the top 6 inches of soil (Reference 26, pages 6-8; Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 41, pages 66-72, 87-93).

Based on the lack of containment and cover, and the presence of particulate hazardous substances in the contaminated soil source, the particulate release to air has been evaluated for Source 9. *Containment value*

Release to ground water  
NE

Release via overland migration and/or flood  
NE

#### 2.4.1 Hazardous Substances

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois. During the inspection, the field investigation team collected a total of three samples, including one sample collected to represent background conditions (Reference 27, pages 5-7; Reference 33, pages 86-97). During the CERCLA Expanded Site Inspection, of July 30 and 31, 1991, the samples collected included X114 and X115 on Jennison-Wright property and sample X112 was collected to determine background conditions (Reference 27, pages 5-7). Sample X112 was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same soil depth (Reference 27, pages 5-7) and in an area otherwise similar to sample collected in the contaminated areas but not exposed to the Jennison-Wright Corporation facility. Analytic results from samples X114 and X115 revealed the presence of the following hazardous substances.

In November of 1988, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection at the Jennison-Wright Corporation facility. During this inspection, the field investigation team collected two soil samples, including one sample collected to represent background conditions (Reference 26, pages 6-8; Reference 41, pages 66-72, 87-93). During the CERCLA Screening Site Inspection of November 29, 1988, the samples collected included X110 from an area observed to have contaminants flowing off-site and sample X107, which was collected to determine background conditions (Reference 26, pages 6-8). Sample X107 was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same soil depth (Reference 26, pages 6-8) and in an area otherwise similar to the sample collected in the contaminated areas but not exposed to the Jennison-Wright Corporation facility. Analytic results from sample X110 revealed the presence of the following hazardous substances.

Sample Number	Hazardous Substance	Conc. (ug/kg)	Ref.	Conc. (ug/kg)	Ref. Conc.	Reference
					Sample Number	
X114	Naphthalene	110,000	J	770	U	X112 27, 29, 33
	Acenaphthylene	73,000	J	770	U	X112 27, 29, 33
	Acenaphthene	130,000	J	770	U	X112 27, 29, 33
	Fluorene	110,000	J	770	U	X112 27, 29, 33
	Phenanthrene	980,000		770	U	X112 27, 29, 33
	Anthracene	400,000	J	770	U	X112 27, 29, 33
	Fluoranthene	1,900,000		770	U	X112 27, 29, 33
	Pyrene	1,500,000		770	U	X112 27, 29, 33
	Benzo(a)anthracene	890,000		770	U	X112 27, 29, 33
	Chrysene	1,400,000		770	U	X112 27, 29, 33
	Benzo(b)fluoranthene	1,100,000		770	U	X112 27, 29, 33
	Benzo(k)fluoranthene	1,000,000		770	U	X112 27, 29, 33
	Benzo(a)pyrene	1,000,000		770	U	X112 27, 29, 33
	Indeno(1,2,3-c,d)pyrene	860,000		770	U	X112 27, 29, 33
	Benzo(g,h,i)perylene	800,000		770	U	X112 27, 29, 33
	Cadmium	3,100		840		X112 27, 29, 33
	Chromium	72,000		7,000		X112 27, 29, 33
	Copper	78,000		25,000		X112 27, 29, 33
	Mercury	300		73	U	X112 27, 29, 33
	Zinc	590,000		170,000		X112 27, 29, 33



X115	Toluene	93,000	6	U	X112	27, 29, 33
	Pentachlorophenol	2,800,000	3,700	U	X112	27, 29, 33
	Chromium	25,000	7,000		X112	27, 29, 33
	Zinc	4,000,000	170,000		X112	27, 29, 33
X110	Naphthalene	11,000	J	9 J	X107	26, 28, 41
	Acenaphthene	28,000	J	2310 U	X107	26, 28, 41
	Dibenzofuran	10,000	J	2310 U	X107	26, 28, 41
	Pentachlorophenol	28,000	J	11200 U	X107	26, 28, 41
	Phenanthrene	160,000	B	180 J	X107	26, 28, 41
	Anthracene	410,000	J	26 J	X107	26, 29, 41
	Fluoranthene	190,000		170 J	X107	26, 29, 41
	Pyrene	1,500,000		140 J	X107	26, 29, 41
	Benzo(a)anthracene	530,000	J	2,300 U	X107	26, 29, 41
	Chrysene	580,000		2,300 U	X107	26, 29, 41
	Benzo(b)fluoranthene	190,000	J	2,300 U	X107	26, 29, 41
	Benzo(a)pyrene	140,000	J	2,300 U	X107	26, 29, 41

J - indicates the concentration is an estimated value.

B - indicates the compound was also found in the blank.

2.4.2. Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity, and Volume is currently unavailable. The area of observed soil contamination is known as has been used to calculate the Hazardous Waste Quantity value for Source 9.

2.4.2.1.1. Hazardous Constituent Quantity

NE

2.4.2.1.2. Hazardous Wastestream Quantity

NE

2.4.2.1.3. Volume

NE

2.4.2.1.4. Area

The total number of square feet of contaminated soils within Source 9 was estimated by first superimposing the peripheral points of documented contamination, determined during the July 1991 CERCLA Expanded Site Inspection (Reference 27, pages 1-9) and the November 1988 CERCLA Screening Site Inspection (Reference 26, pages 1-8), onto a 1988 aerial photograph (Reference 47). Then using a Planix planimeter, the total area between these sampling points was calculated.

Once the total area between the sampling points was determined, the total area beneath any permanent structure was subtracted. The total number of square feet of contaminated soils within Source 9 is estimated to be 172,268 (Reference 48).

The area assigned value of 5.0667058 for Source 9 was derived by dividing the total estimated area of contamination by the area divisor for contaminated soils contained within Table 2-5 of the federal Hazard Ranking System (Reference 1, page 51591).

$$\text{HWQ} = 172,268 \text{ square feet} / 34,000 \text{ square feet} = 5.0667058$$

Area of source (ft<sup>2</sup>): 172,268

Reference(s): 1, 26, 27, 33, 41

Area Assigned Value: 5.0667058

2.4.2.1.5. Source Hazardous Waste Quantity Value

Source Hazardous Waste Quantity Value: 5.0667058

## SITE SUMMARY OF SOURCE DESCRIPTIONS

<u>Source No.</u>	<u>Source Hazardous Waste Quantity Value</u>	<u>Containment</u>			
		<u>Ground Water</u>	<u>Surface Water</u>	<u>Gas</u>	<u>Air Particulate</u>
1	24	NE	NE	Yes	No
2	24	NE	NE	Yes	No
3	319.216	NE	NE	Yes	No
4	319.216	NE	NE	Yes	No
5	174.61538	NE	NE	Yes	No
6	445.13846	NE	NE	Yes	No
7	110.76923	NE	NE	No	Yes
8	3.5850588	NE	NE	Yes	Yes
9	5.0667058	NE	NE	Yes	Yes

## 5.0 SOIL EXPOSURE PATHWAY

### 5.0.1 GENERAL CONSIDERATIONS

In November of 1988 and July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection and CERCLA Expanded Site Inspection, respectively, at the Jennison-Wright Corporation facility in Granite City, Illinois. During these inspections, Illinois EPA personnel collected soil samples from the residential and plant properties, along with waste samples from the plant property. The soil and waste samples were collected to identify potential areas of observed contamination.

The analytical data obtained from the samples, was used to identify nine separate areas of observed contamination. The areas of observed contamination are: A) above ground railroad tank car, B) buried railroad tank car, C) storage tank #1, D) storage tank #2, E) Jennite Lagoon, F) 22nd Street Lagoon, G) asbestos pile, H) contaminated soils (residential areas), and I) contaminated soils (plant property).

Letter (A, B, etc.) by which this area is to be identified: A

Name and description of the area: Area A has been used to designate ~~that area of observed contamination associated with the above ground railroad tank car.~~ The first area of observed contamination identified at the Jennison-Wright Corporation facility is a 12,000 gallon above ground railroad tank car (Reference 31) located on the north portion of the facility (Reference 15, page 1; Figure 2-4). The railroad tank car contains a black-dark brown liquid and sludge (Reference 27, page 8) and has been in this location at least since June of 1978 (Reference 32).

On July 31, 1991, sample number X118 was collected from the railroad tank car as part of a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 8-9). In the analysis of the sample, the above ground railroad tank car was shown to contain a number of volatile organic compounds ranging from 22,000 ug/kg to 110,000 ug/kg (parts per billion), semi-volatile organic compounds ranging from 15,000,000 ug/kg to 280,000,000 ug/kg and concentrations of mercury at 230 ug/kg (Reference 33, pages 113-118).

Location of the area, with reference to a map of the site: Area A, the above ground railroad tank car, is located within the northern portion of the Jennison-Wright Corporation property, west of the fenceline and the railroad tracks (Reference 15, page 1; Figure 2-4).

#### - Background Concentration

Sample ID	Depth	Date	Reference
X112	0.5 inches to 4.5 inches	07-30-91	27

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-9) and in an area otherwise similar to Area A. Sample X112 is located in an area not exposed to the Jennison-wright Corporation facility operations (Figure 2-8).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X112	Benzene	ND	6 U	27, 29, 33
	Toluene		6 U	27, 29, 33
	Ethylbenzene		6 U	27, 29, 33
	Xylene		6 U	27, 29, 33
	Naphthalene		770 U	27, 29, 33
	2-Methylnaphthalene		770 U	27, 29, 33
	Acenaphthene		770 U	27, 29, 33
	Dibenzofuran		770 U	27, 29, 33
	Fluorene		770 U	27, 29, 33
	Phenanthrene		770 U	27, 29, 33
	Anthracene		770 U	27, 29, 33
	Fluoranthene		770 U	27, 29, 33
	Pyrene		770 U	27, 29, 33
	Benzo(a)anthracene		770 U	27, 29, 33
	Chrysene		770 U	27, 29, 33
	Mercury		0.073 U	27, 29, 33

U - indicates the compound was not detected.

ND - indicates "not detected"

#### - Contaminated Samples

Sample ID	Depth	Date	Reference
X118	Taken from inside tank car	07-31-91	27

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected waste sample X118 from the above ground railroad tank car (Reference 27, page 8-9). Field observations made during this inspection indicated that the above ground railroad tank car contained a black-dark brown liquid and sludge (Reference 27, page 8). Analytic results from sample X118 (Reference 33, pages 113-118) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample Sample ID	Hazardous Substance	Concentration (ug/kq)	Quantitation Limit (ug/kq)	Reference
X118	Benzene	22,000	--	27, 29, 33
	Toluene	40,000	--	27, 29, 33
	Ethylbenzene	34,000	--	27, 29, 33
	Xylene	110,000	--	27, 29, 33
	Naphthalene	280,000,000	--	27, 29, 33
	2-Methylnaphthalene	42,000,000 J	--	27, 29, 33
	Acenaphthene	70,000,000	--	27, 29, 33
	Dibenzofuran	47,000,000 J	--	27, 29, 33
	Fluorene	60,000,000 J	--	27, 29, 33
	Phenanthrene	200,000,000	--	27, 29, 33
	Anthracene	25,000,000 J	--	27, 29, 33
	Fluoranthene	98,000,000	--	27, 29, 33
	Pyrene	63,000,000	--	27, 29, 33
	Benzo(a)anthracene	15,000,000 J	--	27, 29, 33
	Chrysene	18,000,000 J	--	27, 29, 33
	Mercury	230	--	27, 29, 33

J - indicates the concentration is an estimated value.

**Attribution:** The elevated levels of volatile organic compounds, semi-volatile organic compounds and mercury found in the above ground railroad tank car, can be attributed to past wood treating activities at the site.

The above-ground railroad tank car has been located within the north side of the Jennison-Wright Corporation facility at least since 1978 (Reference 32). Although no formal documentation exists that this railroad tank car was used to store raw product or waste from on-site operations, the compounds found in this railroad tank car are the same as the compounds found in other tanks on the Jennison-Wright property that did store wood treating wastes and products (Reference 33, pages 77-85, 98-112).

SE-Characterization of Area of Observed Contamination  
Area Letter - A

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the railroad tank car is known and has been used to calculate the Hazardous Waste Quantity Value for Area A.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

Area A, the above ground railroad tank car, is located on the north side of the Jennison-Wright Corporation facility (Figure 2-4) and according to an aerial photograph, has been located in this area since 1978 (Reference 32). The exact use of the railroad car is undetermined, but the volume of the railroad tank car was documented, in a 1991 telephone conversation with a former plant manager, as containing 12,000 gallons (Reference 31).

The assigned volume value for Area A was calculated by first converting the overall tank capacity (12,000 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Volume Assigned Value for Area A, the above ground railroad tank car, is 24.

12,000 gallons / 200 gallons per cubic yard = 60 cubic yards

HWQ = 60 cubic yards / 2.5 = 24

Dimension of source (yd<sup>3</sup> or gallons): 60 cubic yards

References(s): 1, 31

Volume Assigned Value: 24

Area

NE

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 24

Letter (A, B, etc.) by which this area is to be identified: B

Name and description of the area: Area B has been used to designate ~~that area of observed contamination associated with the buried railroad tank car~~. The second area of observed contamination identified at the Jennison-Wright Corporation facility is a 12,000 gallon buried railroad tank car (Reference 31), located on the south portion of the facility (Reference 15, page 2; Figure 2-5). The railroad tank car was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31; Reference 34) and has been in this location since 1974 (Reference 34). Even though Reference 34 indicates the tank was emptied, cleaned and a steel plate was placed on top, a sample from the buried railroad tank car was collected in July 1991 (Reference 27, page 8) and consisted of a black sludge (Reference 27, page 8).

On July 31, 1991, sample number X116 was collected from the buried railroad tank car as part of a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, page 8). In the analysis of the sample, the buried railroad tank car was shown to contain a number of volatile organic compounds ranging from 120 ug/kg to 2200 ug/kg (parts per billion), semi-volatile organic compounds ranging from 94,000 ug/kg to 1,200,000 ug/kg and concentrations of mercury at 210 ug/kg (Reference 33, pages 98-103).

Location of the area, with reference to a map of the site: Area B, the buried railroad tank car, is located along the eastern edge of the south portion of the Jennison-Wright property, west of the fence boundary (Reference 15, page 2, Figure 2-5).

- Background Concentration

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X112	0.5 inches to 4.5 inches	07-30-91	27

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-9) and in an area otherwise similar to Area B. Sample X112 is located in an area not exposed to the Jennison-Wright Corporation facility operations (Figure 2-8).



<u>Sample ID</u>	<u>Hazardous Substance</u>	<u>Concentration (ug/kg)</u>	<u>Sample Quantitation Limit (ug/kg)</u>	<u>Reference</u>
X112	Benzene	ND	6 U	27, 29, 33
	Toluene	ND	6 U	27, 29, 33
	Ethylbenzene	ND	6 U	27, 29, 33
	Xylene	ND	6 U	27, 29, 33
	Naphthalene	ND	770 U	27, 29, 33
	2-Methylnaphthalene	ND	770 U	27, 29, 33
	Acenaphthene	ND	770 U	27, 29, 33
	Dibenzofuran	ND	770 U	27, 29, 33
	Fluorene	ND	770 U	27, 29, 33
	Pentachlorophenol	ND	3700 U	27, 29, 33
	Phenanthrene	ND	770 U	27, 29, 33
	Anthracene	ND	770 U	27, 29, 33
	Fluoranthene	ND	770 U	27, 29, 33
	Pyrene	ND	770 U	27, 29, 33
	Benzo(a)anthracene	ND	770 U	27, 29, 33
	Chrysene	ND	770 U	27, 29, 33
	Benzo(b)fluoranthene	ND	770 U	27, 29, 33
	Benzo(k)fluoranthene	ND	770 U	27, 29, 33
	Benzo(a)pyrene	ND	770 U	27, 29, 33
	Benzo(g,h,i)perylene	ND	770 U	27, 29, 33
	Mercury	ND	0.073 U	27, 29, 33

U - indicates the compound was analyzed for but not detected.

ND - indicates the compound was not detected.

- Contaminated Samples

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X116	Taken from inside tank car	07-31-91	27

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected waste sample X116 from the buried railroad tank car (Reference 27, page 8). Field observations made during this inspection indicated that the buried railroad tank car contained a black sludge (Reference 27, page 8). Analytic results from sample X116 (Reference 33, pages 98-103) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X116	Benzene	120	--	27, 29, 33
	Toluene	470	--	27, 29, 33
	Ethylbenzene	280	--	27, 29, 33
	Xylene	2,200	--	27, 29, 33
	Naphthalene	170,000	--	27, 29, 33
	2-Methylnaphthalene	220,000	--	27, 29, 33
	Acenaphthene	190,000	--	27, 29, 33
	Dibenzofuran	110,000	--	27, 29, 33
	Fluorene	190,000	--	27, 29, 33
	Pentachlorophenol	190,000 J	--	27, 29, 33
	Phenanthrene	640,000	--	27, 29, 33
	Anthracene	190,000	--	27, 29, 33
	Fluoranthene	1,200,000	--	27, 29, 33
	Pyrene	1,100,000	--	27, 29, 33
	Benzo(a)anthracene	240,000	--	27, 29, 33
	Chrysene	440,000	--	27, 29, 33
	Benzo(b)fluoranthene	280,000	--	27, 29, 33
	Benzo(k)fluoranthene	170,000	--	27, 29, 33
	Benzo(a)pyrene	120,000	--	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	130,000	--	27, 29, 33
	Benzo(g,h,i)perylene	94,000	--	27, 29, 33
	Mercury	210	--	27, 29, 33

J - indicates the concentration is an estimated value.

Attribution: The elevated levels of volatile organic compounds, semi-volatile organic compounds and mercury found in the buried railroad tank car, can be attributed to past wood treating activities at the site.

The buried ground railroad tank car has been located within the south side of the Jennison-Wright Corporation facility at least since 1974 (Reference 14, page 6; Reference 34). The buried railroad tank car was used for the storage of pentachlorophenol (Reference 31).

SE-Characterization of Area of Observed Contamination  
Area Letter - B

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the buried railroad tank car is known and has been used to calculate the Hazardous Waste Quantity Value for Area B.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

Area B, the buried railroad tank car, is located on the south side of the Jennison-Wright Corporation facility (Figure 2-5) and according to an aerial photograph (Reference 35) and a letter from the Manager of Governmental Affairs for Jennison-Wright (Reference 34), has been located in this area since 1974. The railroad tank car was used for the storage of pentachlorophenol and has a capacity of 12,000 gallons (Reference 31).

The assigned volume value for Area B was calculated by first converting the overall tank capacity (12,000 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Volume Assigned Value for Area B, the buried railroad tank car, is 24.

12,000 gallons / 200 gallons per cubic yard = 60 cubic yards

HWQ = 60 cubic yards / 2.5 = 24

Dimension of source (yd<sup>3</sup> or gallons): 60 cubic yards

References(s): 1, 31

Volume Assigned Value: 24

Area

NE

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 24

Letter (A, B, etc.) by which this area is to be identified: C

Name and description of the area: Area C has been used to designate that ~~area of observed contamination associated with storage tank #1.~~ The <sup>third</sup> second area of observed contamination identified at the Jennison-Wright Corporation facility: a 159,608 gallon above ground storage tank (Reference 38) located on the south portion of the facility (Figure 2-5). Reference 31, Reference 36 (designated as tank #8 on page 7) and Reference 37 (tank #8) indicate that this storage tank contains between 158,760 gallons and 160,000 gallons. However, volume calculations completed on the storage tank indicate the tank has a storage capacity of 159,608 gallons (Reference 38). Field observations made during the CERCLA Expanded Site Inspection indicate that the storage tank contains a dark brown to black sludge (Reference 27, pages 6-7) and has been on-site at least since 1955 (Reference 39).

On July 31, 1991, sample number X113 was collected from the above-ground storage tank #1 as part of a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, page 6-7). In the analysis of the sample, storage tank #1 was shown to contain a number of volatile organic compounds ranging from 92,000 ug/kg to 280,000 ug/kg (parts per billion), semi-volatile organic compounds ranging from 940,000 ug/kg to 110,000,000 ug/kg, cadmium at 5,000 ug/kg and mercury at 3,300 ug/kg (Reference 33, pages 77-85).

Location of the source, with reference to a map of the site: Area C, above ground storage tank #1, is located on the south portion of the Jennison-Wright facility, just south of 22nd Street (Reference 15, pages 2-3; Figure 2-5). Storage tank #1 is the westernmost tank of the two above-ground storage tanks south of 22nd Street (Figure 2-5).

- **Background Concentration**

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X112	0.5 inches to 4.5 inches	07-30-91	27

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-9) and in an area otherwise similar to Area C. Sample X112 is located in an area not exposed to the Jennison-Wright Corporation facility operations (Figure 2-8).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample	Reference
			Quantitation Limit (ug/kg)	
X112	Benzene	ND	6 U	27, 29, 33
	Toluene	ND	6 U	27, 29, 33
	Ethylbenzene	ND	6 U	27, 29, 33
	Xylene	ND	6 U	27, 29, 33
	Naphthalene	ND	770 U	27, 29, 33
	2-Methylnaphthalene	ND	770 U	27, 29, 33
	Acenaphthene	ND	770 U	27, 29, 33
	Dibenzofuran	ND	770 U	27, 29, 33
	Fluorene	ND	770 U	27, 29, 33
	Pentachlorophenol	ND	3700 U	27, 29, 33
	Phenanthrene	ND	770 U	27, 29, 33
	Anthracene	ND	770 U	27, 29, 33
	Fluoranthene	ND	770 U	27, 29, 33
	Pyrene	ND	770 U	27, 29, 33
	Benzo(a)anthracene	ND	770 U	27, 29, 33
	Chrysene	ND	770 U	27, 29, 33
	Benzo(b)fluoranthene	ND	770 U	27, 29, 33
	Benzo(k)fluoranthene	ND	770 U	27, 29, 33
	Benzo(a)pyrene	ND	770 U	27, 29, 33
	Benzo(g,h,i)perylene	ND	770 U	27, 29, 33
	Cadmium	ND	0.84	27, 29, 33
	Mercury	ND	0.073 U	27, 29, 33

U - indicates the compound was analyzed for but not detected.

- Contaminated Samples

Sample ID	Depth	Date	Reference
X113	Taken inside the storage tank	07-31-91	27, 29, 33

In July 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City (Reference 27, pages 1-9). During this inspection, the field investigation team collected waste sample X113 from the above-ground storage tank #1 (Reference 27, pages 5-6). Field observation made during the this inspection indicated that the above-ground storage tank #1 contained a dark brown to black sludge (Reference 27, pages 5-6). Analytic results from sample X113 (Reference 33, pages 77-85) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X113	Benzene	150,000	--	27, 29, 33
	Toluene	180,000	--	27, 29, 33
	Ethylbenzene	92,000	--	27, 29, 33
	Xylene	280,000	--	27, 29, 33
	Phenol	3,200,000 J	--	27, 29, 33
	2-Methylphenol	940,000 J	--	27, 29, 33
	Naphthalene	110,000,000 D	--	27, 29, 33
	2-Methylnaphthalene	20,000,000	--	27, 29, 33
	Acenaphthylene	2,000,000 J	--	27, 29, 33
	Acenaphthene	31,000,000	--	27, 29, 33
	Dibenzofuran	23,000,000	--	27, 29, 33
	Fluorene	35,000,000	--	27, 29, 33
	Phenanthrene	97,000,000 D	--	27, 29, 33
	Anthracene	85,000,000	--	27, 29, 33
	Fluoranthene	46,000,000	--	27, 29, 33
	Pyrene	31,000,000	--	27, 29, 33
	Benzo(a)anthracene	8,600,000	--	27, 29, 33
	Chrysene	11,000,000	--	27, 29, 33
	Benzo(b)fluoranthene	3,200,000 J	--	27, 29, 33
	Benzo(k)fluoranthene	3,800,000 J	--	27, 29, 33
	Benzo(a)pyrene	3,900,000	--	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	1,800,000 J	--	27, 29, 33
	Benzo(g,h,i)perylene	1,700,000 J	--	27, 29, 33
	Cadmium	5,000	--	27, 29, 33
	Mercury	3,300	--	27, 29, 33

J - indicates the concentration is an estimated value.

D - indicates the sample was diluted.

**Attribution:** The elevated levels of volatile organic compounds, semi-volatile organic compounds, cadmium and mercury found in the storage tank, can be attributed to past wood treating activities at the site.

Storage tank #1 has been located within the south side of the Jennison-Wright Corporation facility at least since 1955 (Reference 39). The storage tank was used for the storage of sludge from the treatment of wood products (Reference 31).

SE-Characterization of Area of Observed Contamination  
Area Letter - C

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of storage tank #1 is known and has been used to calculate the Hazardous Waste Quantity Value for Area C.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

Area C, storage tank #1, is located on the south portion of the Jennison-Wright Corporation facility (Figure 2-5) and according to an aerial photograph, has been located in this area since 1955 (Reference 39). This above ground storage tank was used for the storage of sludge from the treatment of wood products (Reference 31) and the tank has a storage capacity of 159,608 gallons (Reference 38).

$159,608 \text{ gallons} / 200 \text{ gallons per cubic yard} = 798.04 \text{ cubic yards}$

$\text{HWQ} = 798.04 \text{ cubic yards} / 2.5 = 319.216$

Dimension of source ( $\text{yd}^3$  or gallons): 798.04

References(s): 1, 38

Volume Assigned Value: 319.216

Area

NE

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 319.216

Letter (A, B, etc.) by which this area is to be identified: D

Name and description of the area: Area D has been used to designate that ~~area of observed contamination associated with the above-ground storage tank #2.~~ The fourth area of observed contamination identified at the Jennison-Wright Corporation facility: is a 159,608 gallon above ground storage tank (Reference 38) located on the south portion of the facility (Figure 2-5). Reference 31, Reference 36 (designated as tank #8 on page 7) and Reference 37 (tank #8) indicate that this storage tank contains between 79,800 gallons and 160,000 gallons. However, volume calculations completed on the storage tank indicate the tank has a storage capacity of 159,608 gallons (Reference 38). Field observations made during the CERCLA Expanded Site Inspection indicate that the storage tank contains a dark brown liquid (Reference 27, page 8) and has been on-site at least since the 1940's (Reference 31).

On July 31, 1991, sample number X117 was collected from the above-ground storage tank #2 as part of a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, page 8). In the analysis of the sample, the storage tank was shown to contain a number of volatile organic compounds ranging from 180,000 ug/kg to 600,000 ug/kg (parts per billion) and semi-volatile organic compounds ranging from 440,000 ug/kg to 89,000,000 ug/kg (Reference 33, pages 104-112).

Location of the source, with reference to a map of the site: Area D, the storage tank #2, is located just south of 22nd Street, on the south portion of the Jennison-Wright Corporation facility (Reference 15, page 2; Reference 31; Reference 37 [designated as tank #9]; Figure 2-5). Storage tank #2 is the easternmost tank of the two above-ground storage tanks south of 22nd Street (Figure 2-5).

- **Background Concentration**

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X112	0.5 inches to 4.5 inches	07-30-91	27

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-9) and in an area otherwise similar to Area D. Sample X112 is located in an area not exposed to the Jennison-Wright Corporation facility operations (Figure 2-8).



Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X112	Benzene	ND	6 U	27, 29, 33
	Toluene	ND	6 U	27, 29, 33
	Ethylbenzene	ND	6 U	27, 29, 33
	Xylene	ND	6 U	27, 29, 33
	Naphthalene	ND	770 U	27, 29, 33
	2-Methylnaphthalene	ND	770 U	27, 29, 33
	Acenaphthene	ND	770 U	27, 29, 33
	Dibenzofuran	ND	770 U	27, 29, 33
	Fluorene	ND	770 U	27, 29, 33
	Pentachlorophenol	ND	3700 U	27, 29, 33
	Phenanthrene	ND	770 U	27, 29, 33
	Anthracene	ND	770 U	27, 29, 33
	Fluoranthene	ND	770 U	27, 29, 33
	Pyrene	ND	770 U	27, 29, 33
	Benzo(a)anthracene	ND	770 U	27, 29, 33
	Chrysene	ND	770 U	27, 29, 33
	Benzo(b)fluoranthene	ND	770 U	27, 29, 33
	Benzo(k)fluoranthene	ND	770 U	27, 29, 33
	Benzo(a)pyrene	ND	770 U	27, 29, 33
	Benzo(g,h,i)perylene	ND	770 U	27, 29, 33
	Mercury	ND	0.073 U	27, 29, 33

U - indicates the compound was analyzed for but not detected.

- Contaminated Samples

Sample ID	Depth	Date	Reference
X117	Taken from inside the tank	07-31-91	27, 29, 33

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, the field investigation team collected waste sample X117 from the easternmost storage tank (storage tank #2) south of 22nd Street (Reference 27, page 8). Field observations made during this inspection indicated that the storage tank #2 contained a dark brown liquid (Reference 27, page 8). Analytic results from sample X117 (Reference 33, pages 104-112) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X117	Benzene	180,000	--	27, 29, 33
	Toluene	360,000	--	27, 29, 33
	Ethylbenzene	340,000	--	27, 29, 33
	Xylene	600,000	--	27, 29, 33
	Phenol	920,000	--	27, 29, 33
	2-Methylphenol	640,000	--	27, 29, 33
	4-Methylphenol	1,900,000	--	27, 29, 33
	2,4-Dimethylphenol	1,900,000	--	27, 29, 33
	Naphthalene	89,000,000 D	--	27, 29, 33
	2-Methylnaphthalene	14,000,000 JD	--	27, 29, 33
	Acenaphthylene	1,400,000	--	27, 29, 33
	Acenaphthene	23,000,000 D	--	27, 29, 33
	Dibenzofuran	14,000,000 JD	--	27, 29, 33
	Fluorene	19,000,000 JD	--	27, 29, 33
	Phenanthrene	61,000,000 D	--	27, 29, 33
	Fluoranthene	28,000,000 D	--	27, 29, 33
	Pyrene	21,000,000 D	--	27, 29, 33
	Benzo(a)anthracene	4,900,000 JD	--	27, 29, 33
	Chrysene	4,600,000 JD	--	27, 29, 33
	Benzo(b)fluoranthene	1,400,000 JD	--	27, 29, 33
	Benzo(k)fluoranthene	1,700,000	--	27, 29, 33
	Benzo(a)pyrene	2,900,000	--	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	560,000	--	27, 29, 33
	Benzo(g,h,i)perylene	440,000	--	27, 29, 33

J - indicates the concentration is an estimated value.

D - indicates the sample was diluted.

**Attribution:** The elevated levels of volatile organic compounds and semi-volatile organic compounds found in storage tank #2, can be attributed to past wood treating activities at the site.

Storage tank #2 has been located within the south side of the Jennison-Wright Corporation facility at least since the 1940's (Reference 31). The storage tank was used as part of the Oil/Water Separator process (Reference 31), with both creosote and pentachlorophenol wastes processed in the tank as part of a phased separation (Reference 31).

SE-Characterization of Area of Observed Contamination  
Area Letter - D

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity and Hazardous Wastestream Quantity is currently unavailable. The volume of the above ground storage tank #2 is known and has been used to calculate the Hazardous Waste Quantity Value for Area D.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

Area D, the storage tank #2, is located on the south portion of the Jennison-Wright Corporation facility (Figure 2-5) and has been located in this location at least since the 1940's (Reference 31). This 159,608 gallon above ground storage tank (Reference 38) was used as part of the Oil/Water Separator process, with both creosote and pentachlorophenol wastes processed in the tank as part of a phased separation process (Reference 31).

The assigned volume value for Area D was calculated by first converting the overall tank capacity (159,608 gallons) to cubic yards. After determining the total number of cubic yards, the value was divided by the volume divisor for a tank, which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Volume Assigned Value for Area D, the storage tank #2, is 319.216.

$$159,608 \text{ gallons} / 200 \text{ gallons per cubic yard} = 798.04 \text{ cubic yards}$$

$$\text{HWQ} = 798.04 \text{ cubic yards} / 2.5 = 319.216$$

Dimension of source (yd<sup>3</sup> or gallons): 798.04

References(s): 1, 38

Volume Assigned Value: 319.216

Area

NE

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 319.216

Letter (A, B, etc.) by which this area is to be identified: E

Name and description of the area: Area E has been used to designate that area of observed contamination associated with the Jennite Lagoon. The fifth area of observed contamination identified at the Jennison-Wright Corporation facility is the Jennite Lagoon, also referred to as the on-site sludge disposal pit (Reference 18, page 8; Reference 19, page 62; Reference 40, page 1), Area E (Reference 18, page 8), Jennite pit (Reference 14, page 7) and the pitch storage lagoon (Reference 21, page 5). The Jennite Lagoon was used prior to 1973 (Reference 35) and up to 1978 (Reference 32) for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7). Attempts to fill the lagoon by Jennison-Wright failed, because as soil was added to the lagoon the sludge level rose and waste began flowing off-site onto the nearby railroad company's property (Reference 40, page 1).

On November 29, 1988, sample number X108 was collected from the surface to 3 inches deep from the Jennite lagoon area (Reference 26, page 7) as part of a CERCLA Screening Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois. In the analysis of the sample, the Jennite lagoon was shown to contain semi-volatile organic compounds ranging from 490 ug/kg to 44,000 ug/kg (parts per billion) (Reference 41, pages 73-79). The Jennite lagoon was also sampled by Woodward-Clyde Consultants as part of a Site Assessment report prepared for the Jennison-Wright Corporation. The samples were collected from 4 feet to 6 feet and 14 feet to 16 feet deep on November 11, 1987 and December 16, 1987 and were shown to contain volatile organic compounds ranging from 2,600 ug/kg to 34,000 ug/kg (parts per billion) and semi-volatile organic compounds from 460 ug/kg to 4,200,000 ug/kg (Reference 42, pages 32-33, 43-96).

Location of the source, with reference to a map of the site: Area E, the Jennite lagoon, is located along the eastern boundary fence, on the southeastern portion of the Jennison-wright Corporation facility (Reference 14, page 7; Figure 2-5).

- Background Concentration

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X107	0 inches to 3 inches	11-29-88	26

During the November 1988 CERCLA Screening Site Inspection, sample X107 was collected from the top 6 inches of soils (Reference 26, page 6) within a field approximately 1/4 mile southwest of the Jennison-Wright Corporation facility. This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 26, pages 6) and in an area otherwise similar to Area E. Sample X107 is located in an area not exposed to the Jennison-Wright Corporation facility (Figure 2-8). All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X107	Naphthalene	9 J		26, 28, 41
	2-Methylnaphthalene	13 J		26, 28, 41
	Fluorene	ND	2310 U	26, 28, 41
	Phenanthrene	180 B		26, 28, 41
	Anthracene	26 J		26, 28, 41
	Fluoranthene	170 B		26, 28, 41
	Pyrene	140 B		26, 28, 41
	Benzo(a)anthracene	ND	2310 U	26, 28, 41
	Chrysene	ND	2310 U	26, 28, 41
	Benzo(b)fluoranthene	ND	2310 U	26, 28, 41
	Benzo(a)pyrene	ND	2310 U	26, 28, 41

J - indicates the concentration is an estimated value.

B - indicates the compounds was also found in the blank.

U - indicates the compound was analyzed but not detected.

ND - not detected.

#### - Contaminated Samples

Sample ID	Depth	Date	Reference
X108	0 inches to 3 inches	11-29-88	26

In November of 1988, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 26, pages 1-8). During this inspection, the field investigation team collected sample X108 from the Jennite lagoon (Reference 26, page 7). Field observations made during this inspection indicated that the Jennite lagoon contained a brown sandy soil with black streaks (Reference 26, page 7). Analytic results from sample X108 (Reference 41, pages 73-79) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X108	Naphthalene	1,300 J	--	26, 28, 41
	2-Methylnaphthalene	490 J	--	26, 28, 41
	Fluorene	4,200 J	--	26, 28, 41
	Phenanthrene	28,000 J	--	26, 28, 41
	Anthracene	35,000 J	--	26, 28, 41
	Fluoranthene	44,000	--	26, 28, 41
	Pyrene	35,000 B	--	26, 28, 41
	Benzo(a)anthracene	14,000 J	--	26, 28, 41
	Chrysene	16,000 J	--	26, 28, 41
	Benzo(b)fluoranthene	7,000 J	--	26, 28, 41
	Benzo(a)pyrene	8,000 J	--	26, 28, 41

J - indicates the concentration is an estimated value.

**Attribution:** The elevated levels of semi-volatile organic compounds found in the Jennite lagoon can be attributed to past wood treating disposal practices.

The Jennite lagoon was used prior to 1973 (Reference 35) and up to 1978 (Reference 32) for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

SE-Characterization of Area of Observed Contamination  
Area Letter - E

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of the Jennite lagoon is known and will be used to calculate the Hazardous Waste Quantity Value for Area E.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

NE

Area

The total estimated area of the Jennite lagoon is 2,270 square feet (Reference 44) and was measured using a planimeter and the 1973 aerial photograph of the site (Reference 35). The Jennite lagoon was used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

The assigned area value for Area E was calculated by dividing the area of the lagoon by the divisor for a surface impoundment (Buried/backfilled), which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Area Assigned Value for Area E, the Jennite lagoon, is 174.61538.

$$\text{HWQ} = \text{area of lagoon } 2,270 \text{ square feet} / 13 = 174.61538$$

Area of area of observed contamination ( $\text{ft}^2$ ): 2,270 square feet

Reference(s): 1, 35, 44

Area Assigned Value: 174.61538

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 174.61538

Letter (A, B, etc.) by which this area is to be identified: F

Name and description of the area: Area F has been used to designate ~~that area of observed contamination associated with the 22nd Street Lagoon.~~

The sixth area of observed contamination identified at the Jennison-Wright Corporation facility is the 22nd Street Lagoon, also referred to as the off-site disposal pit and Area G (Reference 18, page 10). Use of this lagoon began prior to 1955 (Reference 39) and continued until 1972 when the lagoon was filled in with dirt, bricks and other materials, without removing the waste materials (Reference 14, page 7). The lagoon was used for the disposal of waste and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

On November 29, 1988, sample number X109 was collected from the surface to 3 inches deep (Reference 26, page 7) as part of a CERCLA Screening Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 26, page 7). In the analysis of the sample, the 22nd Street lagoon was shown to contain semi-volatile organic compounds ranging from 200 ug/kg to 28,000 ug/kg (parts per billion) (Reference 41, pages 80-86).

Location of the source, with reference to a map of the site: Area F, the 22nd Street lagoon, is located outside the fence along the eastern edge of the Jennison-Wright Corporation facility, in the northeast corner of the southern portion (Reference 15, page 3; Figure 2-5).

- Background Concentration

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X107	0 inches to 3 inches	11-29-88	26

During the November 1988 CERCLA Screening Site Inspection, sample X107 was collected from the top 6 inches of soils (Reference 26, page 6) within a field approximately 1/4 mile southwest of the Jennison-Wright Corporation facility. This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 26, pages 6) and in an area otherwise similar to Area F. Sample X107 is located in an area not exposed to the Jennison-Wright Corporation facility (Figure 2-8). All concentrations listed below are in ug/kg (parts per billion).



Sample ID	Hazardous Substance	Concentration	Sample Quantitation Limit	Reference
X107	Naphthalene	9 J		26, 28, 41
	2-Methylnaphthalene	13 J		26, 28, 41
	Phenanthrene	180 B		26, 28, 41
	Anthracene	26 J		26, 28, 41
	Fluoranthene	170 B		26, 28, 41
	Pyrene	140 J		26, 28, 41
	Benzo(a)anthracene	ND	2310 U	26, 28, 41
	Chrysene	ND	2310 U	26, 28, 41
	Benzo(b)fluoranthene	ND	2310 U	26, 28, 41
	Benzo(k)fluoranthene	ND	2310 U	26, 28, 41
	Benzo(a)pyrene	ND	2310 U	26, 28, 41
	Indeno(1,2,3-c,d)pyrene	ND	2310 U	26, 28, 41
	Dibenz(a,h)anthracene	ND	2310 U	26, 28, 41
	Benzo(g,h,i)perylene	ND	2310 U	26, 28, 41

J - indicates the concentration is an estimated value.

U - indicates the compound was analyzed but not detected.

B - indicates the compound was also found in the blank.

- Contaminated Samples

Sample ID	Depth	Date	Reference
X109	0 inches to 3 inches	11-29-88	26

In November of 1988, the Illinois Environmental Protection agency conducted a CERCLA Screening Site Inspection of the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 26, pages 1-9). During this inspection, the field investigation team collected sample X109 from the 22nd Street lagoon (Reference 26, page 7). Field observations made during this inspection indicated that the 22nd Street lagoon contained a brown sand with black streaks (Reference 26, page 7). Analytic results from sample X109 (Reference 41, pages 80-86) revealed the presence of the following hazardous substances. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X109	Naphthalene	2,700 J	--	26, 28, 41
	2-Methylnaphthalene	560 J	--	26, 28, 41
	Phenanthrene	12,000 B	--	26, 28, 41
	Anthracene	2,400 J	--	26, 28, 41
	Fluoranthene	24,000 B	--	26, 28, 41
	Pyrene	25,000 B	--	26, 28, 41
	Benzo(a)anthracene	14,000	--	26, 28, 41
	Chrysene	28,000	--	26, 28, 41
	Benzo(b)fluoranthene	22,000	--	26, 28, 41
	Benzo(k)fluoranthene	16,000	--	26, 28, 41
	Benzo(a)pyrene	14,000	--	26, 28, 41
	Indeno(1,2,3-cd)pyrene	21,000	--	26, 28, 41
	Dibenz(a,h)anthracene	3,500	--	26, 28, 41
	Benzo(g,h,i)perylene	23,000	--	26, 28, 41

J - indicates the concentration is an estimated value.

B - indicates the compound was also found in the blank.

**Attribution:** The elevated levels of semi-volatile organic compounds found in the 22nd Street Lagoon can be attributed to past wood treating activities at the site.

The 22nd Street lagoon was used prior to 1955 (Reference 39) and continued until 1973 when the lagoon was filled with dirt, bricks and other materials without removing the waste materials (Reference 14, page 7). The lagoon was used for the disposal of waste and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7).

SE-Characterization of Area of Observed Contamination  
Area Letter - F

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of the lagoon is known, and will be used to calculate the Hazardous Waste Quantity Value score for Area F.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

NE

Area

The total estimated area of the 22nd Street lagoon is 5,786 square feet (Reference 44) and was measured using a planimeter and the 1961 aerial photograph of the site (Reference 45). The 22nd Street lagoon was used for the disposal of waste and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, page 7)

The assigned area value for Area F was calculated by dividing the area of the lagoon by the divisor for a surface impoundment (Buried/backfilled), which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Area Assigned Value for Area F, the 22nd Street lagoon, is 445.13846.

$$\text{HWQ} = \text{area of lagoon } 5,786.8 \text{ square feet} / 13 = 445.13846$$

Area of area of observed contamination (ft<sup>2</sup>): 5,786.8 square feet

Reference(s): 1, 44, 45

Area Assigned Value: 445.13846

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 445.13846

Letter (A, B, etc.) by which this area is to be identified: G

Name and description of the area: Area G has been used to designate that area of observed contamination associated with the asbestos pile. The seventh source identified at the Jennison-Wright Corporation facility is the asbestos-containing material that was found on the ground, in the buildings and on pipes throughout the southern portion of the Jennison-Wright Corporation facility (Reference 30, page 9 & 16; Reference 46, pages 4-6). Some of the asbestos may have been dislodged and moved from its original location during the dismantling and salvaging operations conducted after the 1990 auction and during illegal scavenging of the property.

On July 8, 1991, sample number 117 was collected from an area allegedly containing asbestos material (Reference 46, pages 6-7). In the analysis of the material, asbestos aniosite comprised between 30%-40% of the constituent make-up (Reference 46, page 4).

Location of the source, with reference to a map of the site: The asbestos pile was located on the southern portion of the Jennison-Wright Corporation facility, primarily on the eastern part of the southern portion (Figure 2-5).

- Background Concentration

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
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No background collected for asbestos sampling

Background concentrations for asbestos should be zero, since asbestos is not a naturally occurring substance and no other asbestos sources exist within the vicinity of the Jennison-Wright Corporation facility.

- Contaminated Samples

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
117	Surface	07-08-91	46

A sample of the asbestos material, which was found on the southern portion of the Jennison-Wright Corporation facility, was collected during a sampling visit to the plant in July 1991 by Illinois Environmental Protection Agency personnel (Reference 46, pages 6-7). The sample was collected from fibrous material lying on the ground on the eastern portion of the facility's southern part (Reference 46, pages 6-7). The amount of asbestos which was detected in the sample is presented below.

<u>Sample ID</u>	<u>Hazardous Substance</u>	<u>Concentration</u>	<u>Sample Quantitation Limit</u>	<u>Reference</u>
117	Asbestos	30-40%		46

SE-Characterization of Area of Observed Contamination  
Area Letter - G

Attribution: The sample was collected from material found on the ground at the Jennison-Wright Corporation facility and no other asbestos source was located in the area.

SE-Characterization of Area of Observed Contamination  
Area Letter - G

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of the asbestos pile is known and has been used to calculate the Hazardous Waste Quantity Value for Area G.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

NE

Area

The total estimated area of the asbestos pile is 1,440 square feet and was measured? during the sampling of the asbestos pile on July 8, 1991 Reference 46, page 7)

The assigned are<sup>a</sup>value for Area G was calculated by dividing the area of the asbestos pile by the divisor for a pile, which is contained in Table 5-2 of the Hazard Ranking System (Reference 1, page 51647). Based on the calculations, the Area Assigned Value for Area G, the asbestos pile, is 42.352941.

$$HWQ = 1440 \text{ square feet} / 34 = 42.352941$$

Area of area of observed contamination (ft<sup>2</sup>): 1440 square feet

Reference(s): 46

Area Assigned Value: 42.352941

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 42.352941

Letter (A, B, etc.) by which this area is to be identified: H

Name and description of the area: Area H has been used to designate that area of observed contamination associated with contaminated soils within residential areas. The eighth area of observed contamination identified at the Jennison-Wright Corporation facility are contaminated soils located within residential areas to the north and west of the Jennison-Wright Corporation facility. This source encompasses approximately 121,892 square feet (Reference 27, pages 1-5; Reference 33, pages 5-64; Reference 47; Reference 48; Figure 2-6). The contaminated areas are at the same elevation or slightly higher than on-site areas of the Jennison-Wright Corporation (Reference 4).

On July 30, 1991, eleven soil samples were collected from areas north and west of the Jennison-Wright Corporation facility (Reference 27, pages 1-6) as part of a CERCLA Expanded Site Inspection. The samples were collected to determine if air and particulate emissions had adversely impacted residential soils. Ten soil samples were collected from residential backyards north and west of the Jennison-Wright Corporation facility (X101 thru X110) (Reference 27, pages 1-5) and one sample was collected to determine background conditions in the area (X112) (Reference 27, pages 5-6). The soil sample collected to represent concentrations in the area, was collected from the same soils type (Reference 49, pages 69, 72-74, sheet number 95) and from the same depth as the residential soil samples (Reference 27, pages 1-6). All of the samples collected during the CERCLA Expanded Site Inspection were collected from 1/2 inch to six inches below the surface (Reference 27, pages 1-6).

Location of the source, with reference to a map of the site: The contaminated soils (within the residential areas) source is located immediately west and north of the Jennison-Wright Corporation facility and extends from the north side of the Jennison-Wright Corporation facility to the southwestern end of the Jennison-Wright facility (Reference 27, pages 1-6; Reference 33, pages 5-64; Reference 47; Reference 48; Figure 2-6).

- Background Concentration

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X112	0.5 inches to 4.5 inches	07-30-91	27

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-6) and in an area otherwise similar to Area H. Sample X112 is located in an area not exposed to the Jennison-Wright Corporation facility operations (Figure 2-8).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X112	Naphthalene	ND	770 U	27, 29, 33
	2-Methylnaphthalene	ND	770 U	27, 29, 33
	Dibenzofuran	ND	770 U	27, 29, 33
	Phenanthrene	ND	770 U	27, 29, 33
	Fluoranthene	ND	770 U	27, 29, 33
	Pyrene	ND	770 U	27, 29, 33
	Benzo(a)anthracene	ND	770 U	27, 29, 33
	Chrysene	ND	770 U	27, 29, 33
	Benzo(b)fluoranthene	ND	770 U	27, 29, 33
	Benzo(k)fluoranthene	ND	770 U	27, 29, 33
	Benzo(a)pyrene	ND	770 U	27, 29, 33

U - indicates the compound was analyzed for but not detected.

- Contaminated Samples

Sample ID	Depth in inches	Date	Reference
X101	0.5 to 5.5	07-30-91	27
X102	0.5 to 6.0	07-30-91	27
X103	0.5 to 6.0	07-30-91	27
X104	0.5 to 6.0	07-30-91	27
X105	0.5 to 6.0	07-30-91	27
X108	0.5 to 5.5	07-30-91	27
X109	0.5 to 6.0	07-30-91	27
X110	0.5 to 6.0	07-30-91	27

The samples were collected in residential backyards to determine the impact air or particulate emissions may have had on the surrounding area. All concentrations listed below are in ug/kg (parts per billion).

Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X101	Fluoranthene	1200	--	27, 29, 33
	Pyrene	850	--	27, 29, 33
X102	Phenanthrene	2300	--	27, 29, 33
	Fluoranthene	2900	--	27, 29, 33
	Pyrene	2200	--	27, 29, 33
	Benzo(a)anthracene	1500	--	27, 29, 33
	Chrysene	1600	--	27, 29, 33
	Benzo(b)fluoranthene	2200	--	27, 29, 33
	Benzo(k)fluoranthene	1700	--	27, 29, 33
	Benzo(a)pyrene	1400	--	27, 29, 33



Sample ID	Hazardous Substance	Concentration (ug/kg)	Sample Quantitation Limit (ug/kg)	Reference
X103	Naphthalene	1400	--	27, 29, 33
	2-Methylnaphthalene	2000	--	27, 29, 33
X104	Phenanthrene	920	--	27, 29, 33
	Fluoranthene	1200	--	27, 29, 33
	Pyrene	810	--	27, 29, 33
X105	Fluoranthene	1000	--	27, 29, 33
	Pyrene	940	--	27, 29, 33
	Benzo(b)fluoranthene	870	--	27, 29, 33
X108	Phenanthrene	1400	--	27, 29, 33
	Fluoranthene	1900	--	27, 29, 33
	Pyrene	1700	--	27, 29, 33
	Benzo(a)anthracene	900	--	27, 29, 33
	Chrysene	940	--	27, 29, 33
	Benzo(b)fluoranthene	1100	--	27, 29, 33
	Benzo(k)fluoranthene	1100	--	27, 29, 33
	Benzo(a)pyrene	970	--	27, 29, 33
X109	Phenanthrene	1500	--	27, 29, 33
	Fluoranthene	1700	--	27, 29, 33
	Pyrene	1800	--	27, 29, 33
	Benzo(a)anthracene	930	--	27, 29, 33
	Chrysene	1000	--	27, 29, 33
	Benzo(b)fluoranthene	1200	--	27, 29, 33
	Benzo(k)fluoranthene	1000	--	27, 29, 33
	Benzo(a)pyrene	1000	--	27, 29, 33
X110	Phenanthrene	1200	--	27, 29, 33
	Fluoranthene	1600	--	27, 29, 33
	Pyrene	1400	--	27, 29, 33
	Chrysene	1200	--	27, 29, 33
	Benzo(b)fluoranthene	810	--	27, 29, 33

**Attribution:** The semi-volatile organic compounds found in the residential yards were the same semi-volatile organic compounds found in storage tanks, railroad tank cars, lagoons and soil on Jennison-Wright Corporation property.

The contaminated residential areas are at the same elevation or are at a higher elevation than on-site areas (Reference 4), and therefore can not be attributed to surface water run-off from the Jennison-Wright Corporation facility. The off-facility contamination in these residential areas is believed to be the result of particulate deposition or stack emission deposition of contaminants from the Jennison-Wright Corporation facility.

SE-Characterization of Area of Observed Contamination  
Area Letter - H

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity and Volume is currently unavailable. The area of observed soil contamination is known and has been used to calculate the Hazardous Waste Quantity value for Area H.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

NE

Area

The total number of square feet of contaminated soils within Area H was estimated by first superimposing the peripheral points of documented contamination, determined during the July 1991 CERCLA Expanded Site Inspection (Reference 27, pages 1-9), onto a 1988 aerial photograph (Reference 47). Then using a Planix planimeter, the total area between these sampling points was calculated.

Once the total area between the sampling points was determined, the total area beneath any permanent structures was subtracted. The total number of square feet of contaminated soils within Area H is estimated to be 121,892 (Reference 48).

The area assigned value of 3.5850588 for Area H was derived by dividing the total estimated area of contamination by the area divisor for contaminated soils contained within Table 5-2 of the Hazard Ranking System (Reference 1, page 51647).

$$HWQ = 121,892 \text{ square feet} / 34,000 \text{ square feet} = 3.5850588$$

Area of area of observed contamination (ft<sup>2</sup>): 121,892 square feet

Reference(s): 1, 33, 47, 48

Area Assigned Value: 3.5850588

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 3.5850588

Letter (A, B, etc.) by which this area is to be identified: I

Name and description of the area: Area I has been used to designate ~~that area of observed contamination associated with contaminated soils on plant property.~~ The ninth and final area of observed contamination identified at the Jennison-Wright Corporation facility, is contaminated soils located on the plant property. This contaminated soil area located within the plant property, extends from the northeastern portion of the facility to the southern portion of the facility. This area encompasses approximately 172,268 square feet (Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 26, pages 6-8; Reference 41, pages 66-72, 87-93). The contaminated areas are the result of spills, leaks and drips from activities at the Jennison-Wright Corporation site (Reference 65).

On July 31, 1991, during the CERCLA Expanded Site Inspection, two soil samples (X114 and X115) were collected from two areas on the south portion of the Jennison-Wright Corporation facility (Reference 27, page 7). These soil samples were collected from the surface to 3 inches deep (Reference 27, page 3) and were compared to sample X112 (Reference 27, pages 5-6). The soil sample collected to represent background concentrations within the area, was collected from the same soil type (Reference 49, pages 69, 72-74, sheet number 95) and from the same soil depth as the on-facility soil samples (Reference 27, page 7). All samples collected during the CERCLA Expanded Site Inspection were collected from 1/2 inch to 6 inches below the surface (Reference 27, pages 5-7).

An additional soil sample collected during the CERCLA Screening Site Inspection on November 29, 1988, but was collected in the north portion of the Jennison-Wright Corporation facility. This soil sample (X110) was collected from the surface to one (1) inch deep (Reference 26, pages 7-8) and was compared to background sample X107. The soil sample collected to represent background conditions within the area, was collected from the same soil type (Reference 49, pages 69, 72-74, sheet number 95) and the from the same depth (Reference 26, page 6) as the on-facility soil sample.

Location of the source, with reference to a map of the site: The contaminated soils within the plant property extends from the northeastern portion of the Jennison-Wright Corporation facility to the southern portion (Reference 26, pages 6-8; Reference 27, pages 5-7; Reference 33, pages 86-97; Reference 41, pages 66-72, 87-93; Figure 2-7).

- **Background Concentration**

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X107	0 inches to 3 inches	11-29-88	26
X112	0.5 inches to 4.5 inches	07-30-91	27

During the November 1988 CERCLA Screening Site Inspection, sample X107 was collected from the top 6 inches of soils (Reference 26, page 6) within a field approximately 1/4 mile southwest of the Jennison-Wright Corporation facility. This sample was collected in the same soil type (Reference 49,

pages 69, 72-74, sheet number 95), from the same depth (Reference 26, pages 6) and in an area otherwise similar to Area I. Sample X107 is located in an area not exposed to the Jennison-Wright Corporation facility (Figure 2-8). All concentrations listed below are in ug/kg (parts per billion).

During the July 1991 CERCLA Expanded Site Inspection, sample X112 was collected from the top 6 inches of soils within a field approximately 1/2 mile west of the Jennison-Wright Corporation facility (Reference 27, pages 5-6). This sample was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 1-9) and in an area otherwise similar to Area I. Sample X112 is located in an area not exposed to the Jennison-Wright Corporation facility operations (Figure 2-8).

Sample ID	Hazardous Substance	Concentration	Sample Quantitation Limit	Reference
X107	Naphthalene	9 J		26, 28, 41
	2-Methylnaphthalene	13 J		26, 28, 41
	Phenanthrene	180 B		26, 28, 41
	Anthracene	26 J		26, 28, 41
	Fluoranthene	170 B		26, 28, 41
	Pyrene	140 B		26, 28, 41
	Benzo(a)anthracene	ND	2310 U	26, 28, 41
	Chrysene	ND	2310 U	26, 28, 41
	Benzo(b)fluoranthene	ND	2310 U	26, 28, 41
	Benzo(k)fluoranthene	ND	2310 U	26, 28, 41
	Benzo(a)pyrene	ND	2310 U	26, 28, 41
	Indeno(1,2,3-c,d)pyrene	ND	2310 U	26, 28, 41
	Benzo(g,h,i)perylene	ND	2310 U	26, 28, 41
X112	Toluene	ND	6 U	27, 29, 33
	Naphthalene	ND	770 U	27, 29, 33
	Acenaphthylene	ND	770 U	27, 29, 33
	Acenaphthene	ND	770 U	27, 29, 33
	Fluorene	ND	770 U	27, 29, 33
	Pentachlorophenol	ND	3700 U	27, 29, 33
	Phenanthrene	ND	770 U	27, 29, 33
	Anthracene	ND	770 U	27, 29, 33
	Fluoranthene	ND	770 U	27, 29, 33
	Pyrene	ND	770 U	27, 29, 33
	Benzo(a)anthracene	ND	770 U	27, 29, 33
	Chrysene	ND	770 U	27, 29, 33
	Benzo(b)fluoranthene	ND	770 U	27, 29, 33
	Benzo(k)fluoranthene	ND	770 U	27, 29, 33
	Benzo(a)pyrene	ND	770 U	27, 29, 33
	Indeno(1,2,3-c,d)pyrene	ND	770 U	27, 29, 33
	Benzo(g,h,i)perylene	ND	770 U	27, 29, 33
	Cadmium	0.84	--	27, 29, 33
	Chromium	7.0	--	27, 29, 33
	Copper	25	--	27, 29, 33
	Mercury	ND	0.073 U	27, 29, 33
	Zinc	170	--	27, 29, 33

- J - indicates the compound is an estimated value.
- U - indicates the compound was analyzed for but not detected.
- B - indicates the compound was also found in the blank.

- Contaminated Samples

<u>Sample ID</u>	<u>Depth</u>	<u>Date</u>	<u>Reference</u>
X110	surface to 1 inch	11-29-88	26
X114	surface to 1 inch	07-30-91	27
X115	surface to 3 inches	07-30-91	27

In November of 1988, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection at the Jennison-Wright Corporation facility. During this inspection, the field investigation team collected two samples, including one sample collected to represent background conditions (Reference 26, pages 7-8; Reference 41, pages 66-72, 87-93). During the CERCLA Screening Site Inspection, of November 29, 1988, the samples collected included X110 from an area observed to have contaminants flowing off-site and X107, which was collected to determine background conditions (Reference 26, pages 7-8). Sample X107 was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same soil depth (Reference 26, pages 7-8) and in an area otherwise similar to the sample collected in the contaminated areas but not exposed to the Jennison-Wright Corporation facility. Analytic results from sample X110 revealed the presence of the following hazardous substances.

In July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility. During the inspection, the field investigation team collected a total of three samples, including one sample collected to represent background conditions (Reference 27, page 5-7; Reference 33, pages 71-76, 86-97). During the CERCLA Expanded Site Inspection, of July 30 and 31, 1991, the samples collected included X114 and X115 on Jennison-Wright property and sample X112 was collected to determine background conditions (Reference 27, pages 5-7). Sample X112 was collected in the same soil type (Reference 49, pages 69, 72-74, sheet number 95), from the same depth (Reference 27, pages 5-6) and in an area otherwise similar to samples collected in the contaminated areas but not exposed to the Jennison-Wright Corporation facility. Analytic results from samples X114 and X115 revealed the presence of the following hazardous substances.

Sample ID	Hazardous Substance	Concentration	Sample Quantitation Limit	Reference
X110	Naphthalene	11,000 J	--	26, 28, 41
	Acenaphthene	28,000 J	--	26, 28, 41
	Dibenzofuran	10,000 J	--	26, 28, 41
	Pentachlorophenol	28,000 J	--	26, 28, 41
	Phenanthrene	16,000 B	--	26, 28, 41
	Anthracene	410,000	--	26, 28, 41
	Fluoranthene	190,000	--	26, 28, 41
	Pyrene	1,500,000	--	26, 28, 41
	Benzo(a)anthracene	530,000 J	--	26, 28, 41
	Chrysene	580,000	--	26, 28, 41
	Benzo(b)fluoranthene	190,000 J	--	26, 28, 41
	Benzo(a)pyrene	140,000	--	26, 28, 41
X114	Naphthalene	110,000 J		27, 29, 33
	Acenaphthylene	73,000 J		27, 29, 33
	Acenaphthene	130,000 J		27, 29, 33
	Fluorene	110,000 J		27, 29, 33
	Phenanthrene	980,000		27, 29, 33
	Anthracene	400,000 J		27, 29, 33
	Fluoranthene	1,900,000		27, 29, 33
	Pyrene	1,500,000		27, 29, 33
	Benzo(a)anthracene	890,000		27, 29, 33
	Chrysene	1,400,000		27, 29, 33
	Benzo(b)fluoranthene	1,100,000		27, 29, 33
	Benzo(k)fluoranthene	1,000,000		27, 29, 33
	Benzo(a)pyrene	1,000,000		27, 29, 33
	Indeno(1,2,3-c,d)pyrene	860,000		27, 29, 33
	Benzo(g,h,i)perylene	800,000		27, 29, 33
	Cadmium	3,100		27, 29, 33
	Chromium	72,000		27, 29, 33
	Copper	78,000		27, 29, 33
	Mercury	300		27, 29, 33
	Zinc	590,000		27, 29, 33
X115	Toluene	93,000		27, 29, 33
	Pentachlorophenol	2,800,000		27, 29, 33
	Chromium	25,000		27, 29, 33
	Zinc	4,000,000		27, 29, 33

J - indicates the concentration is an estimated value.

B - indicates the compound was also found in the blank.

**Attribution:** The samples were collected from areas of past site activities or in areas affected by site activities, such as spills, leaks and drips. The compounds found in the analysis of the samples are similar to those compounds found in the storage tanks, railroad tank cars and lagoons.

SE-Characterization of Area of Observed Contamination  
Area Letter - I

Area Hazardous Waste Quantity

Detailed information regarding Hazardous Constituent Quantity, Hazardous Wastestream Quantity, and Volume is currently unavailable. The area of observed soil contamination is known as has been used to calculate the Hazardous Waste Quantity value for Area I.

Hazardous Constituent Quantity

NE

Are the data complete for hazardous constituent quantity for this area? No

Hazardous Wastestream Quantity

NE

Are the data complete for hazardous wastestream quantity for this area? No

Volume

NE

Area

The total number of square feet of contaminated soils within Area I was estimated by first superimposing the peripheral points of documented contamination, determined during the July 1991 CERCLA Expanded Site Inspection (Reference 27, pages 1-9) and the November 1988 CERCLA Screening Site Inspection (Reference 26, pages 1-8), onto a 1988 aerial photograph (Reference 47). Then using a Planix planimeter, the total area between these sampling points was calculated.

Once the total area between the sampling points was determined, the total area beneath any permanent structure was subtracted. The total number of square feet of contaminated soils within Area I is estimated to be 172,268 square feet (Reference 48).

The area assigned value of 5.0667058 for Area I was derived by dividing the total estimated area of contamination by the area divisor for contaminated soils contained within Table 5-2 of the Hazard Ranking System (Reference 1, page 51647).

$$HWQ = 172,268 \text{ square feet} / 34,000 \text{ square feet} = 5.0667058$$

Area of area of observed contamination (ft<sup>2</sup>): 172,268 square feet

Reference(s): 1, 33, 41, 47, 48

Area Assigned Value: 5.0667058

Area Hazardous Waste Quantity Value

Area of Observed Contamination Hazardous Waste Quantity Value: 5.0667058

Non-responsive



Summary of Site ContaminationLevel I Samples

In November of 1988 and July of 1991, the Illinois Environmental Protection Agency conducted a CERCLA Screening Site Inspection and CERCLA Expanded Site Inspection, respectively, at the Jennison-Wright Corporation facility in Granite City, Illinois. During the CERCLA Screening Site Inspection, eight soil samples and a background soil sample were collected from the top six inches of soil (Reference 26, pages 3-8). Comparing the results of the soil samples, collected at or near the facility, to the background sample, three of the eight soil samples met or exceeded the Level I criteria established in Table 5-3 of the Hazard Ranking System (Reference 1, page 51647).

During the CERCLA Expanded Site Inspection, Illinois EPA personnel collected 17 soil samples and a background sample. Comparing the results of the soil samples, collected at or near the facility, to the background sample, 9 of the 17 soil samples met or exceeded the Level I criteria established in Table 5-3 of the Hazard Ranking System (Reference 1, page 51647).

The soil samples meeting or exceeding Level I criteria (health-based benchmark) for a specific compound can be found in the tables below.

Sample ID: X118 (Area A) was collected during the July 1991 CERCLA Expanded Site Inspection from the above ground railroad tank car.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzene	22,000 ppb	20,000 ppb	Cancer Risk
Naphthalene	280,000,000 ppb	23,000,000 ppb	Reference Dose
Acenaphthene	70,000,000 ppb	35,000,000 ppb	Reference Dose
Fluorene	60,000,000 ppb **	23,000,000 ppb	Reference Dose
Fluoranthene	98,000,000 ppb	23,000,000 ppb	Reference Dose
Pyrene	63,000,000 ppb	17,000,000 ppb	Reference Dose

\*\* - indicates the compound is an estimated value.

Sample ID: X116 (Area B) was collected during the July 1991 CERCLA Expanded Site Inspection from the buried railroad tank car.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Pentachlorophenol	190,000 ppb **	4,900 ppb	Cancer Risk
Benzo(a)pyrene	120,000 ppb	80 ppb	Cancer Risk

\*\* - indicates the compound is an estimated value.

Sample ID: X113 (Area C) was collected during the July 1991 CERCLA Expanded Site Inspection from storage tank #1.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzene	150,000 ppb	20,000 ppb	Cancer Risk
Naphthalene	110,000,000 ppb *	23,000,000 ppb	Reference Dose
Fluorene	35,000,000 ppb	23,000,000 ppb	Reference Dose
Fluoranthene	46,000,000 ppb	23,000,000 ppb	Reference Dose
Pyrene	31,000,000 ppb	17,000,000 ppb	Reference Dose
Benzo(a)pyrene	3,900,000 ppb	80 ppb	Cancer Risk

\* - indicates sample was diluted to obtain concentration

Sample ID: X117 (Area D) was collected during the July 1991 CERCLA Expanded Site Inspection from storage tank #2.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzene	180,000 ppb	20,000 ppb	Cancer Risk
Naphthalene	89,000,000 ppb *	23,000,000 ppb	Reference Dose
Fluoranthene	28,000,000 ppb *	23,000,000 ppb	Reference Dose
Pyrene	21,000,000 ppb	17,000,000 ppb	Reference Dose
Benzo(a)pyrene	2,900,000 ppb	80 ppb	Cancer Risk

\* - indicates sample was diluted to obtain the concentration

Sample ID: X108 (Area E) was collected during the November 1988 CERCLA Screening Site Inspection from the Jennite Lagoon.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	8,000 ppb **	80 ppb	Cancer Risk

\*\* - indicates the concentration was an estimated value.

Sample ID: X109 (Area F) was collected during the November 1988 CERCLA Screening Site Inspection from the 22nd Street Lagoon.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	14,000 ppb	80 ppb	Cancer Risk

Sample ID: X102 (Area H) was collected during the July 1991 CERCLA Expanded Site Inspection from a residential yard at **Non-responsive**  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	1,400 ppb	80 ppb	Cancer Risk

Sample ID: X108 (Area H) was collected during the July 1991 CERCLA Expanded Site Inspection from a residential yard at **Non-responsive**  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	970 ppb	80 ppb	Cancer Risk

Sample ID: X109 (Area H) was collected during the November 1988 CERCLA Screening Site Inspection from a residential yard at **Non-responsive**  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	1,000 ppb	80 ppb	Cancer Risk

Sample ID: X110 (Area I) was collected during the November 1988 CERCLA Screening Site Inspection from northeast part of the Jennison-Wright Corporation facility.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	14,000 ppb **	80 ppb	Cancer Risk

\*\* - indicates the concentration is an estimated value.

Sample ID: X114 (Area I) was collected during the July 1991 CERCLA Expanded Site Inspection from the south part of the Jennison-Wright Corporation facility.  
Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Benzo(a)pyrene	1,000,000 ppb	80 ppb	Cancer Risk

Sample ID: X115 (Area I) was collected during the July 1991 CERCLA Expanded Site Inspection from the south west side of Jennison-Wright Corporation facility.

Reference for Benchmark: Superfund Chemical Data Matrix (Reference 2)

<u>Hazardous Substance</u>	<u>Hazardous Substance Concentration</u>	<u>Benchmark Concentration</u>	<u>Benchmark</u>
Pentachlorophenol	2,800,000 ppb	4,900 ppb	Cancer Risk

#### Level II Samples

In July of 1992, the Illinois EPA conducted a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois. During the CERCLA Expanded Site Inspection, Illinois EPA personnel collected 17 soil samples and 1 background sample. Comparing the results of the soil samples collected at or near the facility, to the background sample, 9 of the 17 soil samples met or exceeded the Level I criteria established in Table 5-3 of the Hazard Ranking System (Reference 1, page 51647). Additionally, five of the eight remaining samples met or exceeded the criteria for observed release established in Table 2-3 of the Hazard Ranking System (Reference 1, page 51589).

The soil samples meeting or exceeding the criteria for an observed release established in Table 2-3 of the Hazard Ranking System and not identified above in the Level I samples, can be found in the table below.

<u>Sample ID</u>	<u>Hazardous Substance</u>
X101 (Area H)	Fluoranthene
X101 (Area H)	Pyrene
X103 (Area H)	Naphthalene
X103 (Area H)	2-methylnaphthalene
X104 (Area H)	Phenanthrene
X104 (Area H)	Fluoranthene
X105 (Area H)	Fluoranthene
X105 (Area H)	Pyrene
X105 (Area H)	Benzo(b)fluoranthene
X110 (Area H)	Phenanthrene
X110 (Area H)	Fluoranthene
X110 (Area H)	Pyrene
X110 (Area H)	Chrysene
X110 (Area H)	Benzo(b)fluoranthene

**5.1 RESIDENT POPULATION THREAT**

Area H, contaminated soils within residential areas, includes those contaminated areas located between the points of documented contamination (X101 and X110) (Reference 27, pages 1-5; Reference 33, pages 5-10, 59-64). Area H includes all the properties bordering the western edge of the Jennison-Wright Corporation facility and one property north of the facility. The locations of samples exhibiting observed contamination, as established in the Hazard Ranking System (Reference 1, page 51589), can be found in the table below.

<u>Sample ID</u>	<u>Location of Population Relative to Observed Contamination</u>	
X101 (Letter H)	Residence	Approximately 21 feet south of house
X102 (Letter H)	Residence	Approximately 60 feet east of house
X103 (Letter H)	Residence	Approximately 80 feet east of house
X104 (Letter H)	Residence	Approximately 55 feet east of house
X105 (Letter H)	Residence	Approximately 57 feet east of house
X108 (Letter H)	Residence	Approximately 40 feet east of house
X109 (Letter H)	Residence	Approximately 41 feet east of house
X110 (Letter H)	Residence	Approximately 21 feet east of house

**5.1.1 Likelihood of Exposure**

A value of 550 has been assigned for the Likelihood of Exposure, because samples X101, X102, X103, X104, X105, X108, X109 and X110 were all collected within the top 6 inches of soil (Reference 27, pages 1-5) from residential yards west of the Jennison-Wright Corporation facility. (Reference 27, pages 1-5; Figure 2-6). Each of these samples were collected within the residential property boundary and within 200 feet of the residence (Reference 27, pages 1-5) and contained compounds that met or exceeded the criteria for observed release as established in the Hazard Ranking System (Reference 1, page 51589).

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Resident Population Threat Likelihood of  
Exposure Factor Category Value: 550

### 5.1.2 Waste Characteristics

#### 5.1.2.1 Toxicity

During the CERCLA Screening Site Inspection of November 1988 and the CERCLA Expanded Site Inspection of July 1991, the Illinois EPA collected soil samples on Jennison-Wright Corporation property and in residential areas west of the facility, along with waste samples on the facility (Reference 26, pages 3-8; Reference 27, pages 1-5). Analysis of the samples documented the existence of the following compounds that meet or exceed the criteria for observed contamination as established in the Hazard Ranking System (Reference 1, page 51589).

<u>Hazardous Substance</u>	<u>Toxicity Factor Value</u>	<u>Reference</u>
Benzene	100	2
Toluene	10	2
Ethylbenzene	10	2
Xylene	1	2
Phenol	1	2
2-Methylphenol [cresol, o-]	10	2
4-Methylphenol [cresol, p-]	10	2
2,4-Dimethylphenol	100	2
Naphthalene	100	2
2-Methylnaphthalene	--	50
Acenaphthylene	--	2
Acenaphthene	10	2
Dibenzofuran	--	51
Fluorene	100	2
Pentachlorophenol	100	2
Phenanthrene	1	2
Anthracene	10	2
Fluoranthene [Benzo(j,k)fluorene]	100	2
Pyrene	100	2
Benzo(a)anthracene	1,000	2
Chrysene	--	2
Benzo(b)fluoranthene [Benzofluoranthene, 3,4-]	10,000	2
Benzo(k)fluoranthene	--	2
Benzo(a)pyrene	10,000	2
Indeno(1,2,3-c,d)pyrene	--	51
Dibenz(a,h)anthracene	10,000	2
Benzo(g,h,i)perylene	--	51
Cadmium	10,000	2
Chromium	10,000	2
Copper	--	2
Mercury	10,000	2
Zinc	10	2
Asbestos	10,000	2

Of the hazardous substances meeting or exceeding the criteria for observed contamination as established by the Hazard Ranking System (Reference 1, page 51589), the following compounds had a Toxicity Factor Value of 10,000: Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Cadmium, Chromium, Mercury and Asbestos.

Toxicity Factor Value: 10,000

5.1.2.2 Hazardous Waste Quantity

Area Letter	Area Hazardous Waste Quantity Value	Constituent Quantity Data Complete? (Yes/No)
A	24	NO
B	24	NO
C	319	NO
D	319	NO
E	175	NO
F	445	NO
G	53	NO
H	4	NO
I	5	NO

Sum of values: 1368

The sum of the area hazardous waste quantity values for areas of contamination A through I totals 1368. Utilizing Table 2-6 of the Hazard Ranking System (Reference 1, page 51591), the area hazardous waste quantity value of 1368 was assigned a Hazardous Waste Quantity Value of 100.

5.1.2.3 Calculation of Waste Characteristics Factor Category Value

Toxicity of 10,000 multiplied by the Hazardous Waste Quantity value of 100 equals 1,000,000 or  $1 \times 10^6$ . Utilizing Table 2-7 of the Hazard Ranking System (Reference 1, page 51592), the Hazardous Waste Quantity Factor Value of  $1 \times 10^6$  is assigned a Waste Characteristics Factor Category Value of 32.

Toxicity Factor Value x Hazardous  
Waste Quantity Factor Value: 1,000,000

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Hazardous Waste Quantity Factor Value:  $1 \times 10^6$   
Waste Characteristics Factor Category Value: 32

## 5.1.3 TARGETS

5.1.3.1 Resident Individual

The Illinois EPA conducted a CERCLA Expanded Site Inspection at the Jennison-Wright Corporation facility in Granite City, Illinois in July of 1991. During this inspection, Illinois EPA personnel collected 10 soil samples within the top 6 inches of soil (Reference 27, pages 1-5) from residential yards to the west and north of the Jennison-Wright Corporation facility (Figure 2-6).

Sample X102 was collected from the backyard of the residence at Non-responsive Non-responsive at a point 59 feet, 5 inches east from the northeast corner of the house (Reference 27, pages 1-2). Analytical results from this sample point showed Benzo(a)pyrene at 1,400 ug/kg (parts per billion) (Reference 33, page 14), which exceeds the criteria for an observed release as established in Table 2-3 of the Hazard Ranking System (Reference 1, page 51589). The level of Benzo(a)pyrene at 1,400 parts per billion, also exceeds the health-based benchmark for Benzo(a)pyrene (80 ppb) (Reference 2), establishing a Level I concentration at sample point X102.

A resident individual factor value of 50 has been assigned because there is at least one resident individual subject to Level I concentrations (Reference 1, page 51647).

Area Letter: H

Level of Contamination: Level I

Sample X102 was collected by Illinois EPA personnel on July 30, 1991 in the backyard of the house at Non-responsive (Reference 27, pages 1-2). The sample was collected from the top 6 inches of soil at a point 59 feet, 5 inches from the northeast corner of the residence (Reference 27, pages 1-2). A residential survey conducted by Illinois EPA personnel on June 26, 1991 indicates four people residing at Non-responsive (Reference 52, page 4).

Reference: 27, pages 1-2; Reference 52, page 4

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Resident Individual Factor Value: 50



5.1.3.2 Resident Population5.1.3.2.1 Level I Concentrations

The Illinois EPA conducted a CERCLA Expanded Site Inspection in July 1991 at the Jennison-Wright Corporation facility in Granite City, Illinois. During this inspection, 17 soil samples from the top 6 inches of soil were collected from residential yards, storage tanks, railroad tank cars, and other areas of past site activity (Reference 27, pages 1-9). The analytical data, when compared to the background sample, revealed 13 of the 17 locations meeting or exceeding the criteria for an observed release as established in Table 2-3 of the Hazard Ranking System (Reference 1, page 51589). Of the 13 sample locations documenting an observed release, 8 of the locations contained concentrations of compounds above health-based benchmarks (Reference 2). Five of the eight sampling points were areas located on Jennison-Wright Corporation property, with no residents living on the property. Three of the sampling locations were collected in residential backyards and contained Level I concentrations of benzo(a)pyrene. These samples were collected west of the Jennison-Wright Corporation facility at [Non-responsive] (X102), [Non-responsive] (X108) and [Non-responsive] (X109) (Reference 27, pages 1-2, 4). The residences contained the following number of people: [Non-responsive]

[Non-responsive]  
people (Reference 52, pages 4, 26, 28). The populations were obtained by a residential survey conducted by the Illinois EPA on June 26, 1991 (Reference 52, pages 4, 26, 28).

Area Letter	Resident Individuals		Total
	(Residences	County Multiplier	
A			0
B			0
C			0
D			0
E			0
F			0
G			0
H			25
I			0

The total number of residents subject to Level I concentrations were derived from a residential survey conducted by the Illinois EPA on June 26, 1991 (Reference 52, pages 4, 26, 28).

Reference: 52, pages 4, 26, 28

Sum of individuals subject to Level I concentrations: 25

Level I Concentration Factor Value =  $25 \times 10 = 250$

### 5.1.3.2.2 Level II Concentrations

The Illinois EPA conducted a CERCLA Expanded Site Inspection in July 1991 at the Jennison-Wright Corporation facility in Granite City, Illinois (Reference 27, pages 1-9). During this inspection, 10 soil samples, from the top 6 inches of soil, were collected from residential yards on the west and north of the Jennison-Wright Corporation facility (Reference 27, pages 1-6). The analytical results, when compared to the background sample, revealed that seven of the samples met or exceeded the criteria for an observed release as established in Table 2-3 of the Hazard Ranking System (Reference 1, page 51589). Of these seven samples, three contained concentrations of semi-volatile organic compounds above health-based benchmarks (Reference 2), while the other four samples established an observed release, but were below any one or combination of health-based benchmarks for the compounds of concern.

Areas of observed contamination include those soils which lie between the points of documented contamination, X101, X102, X103, X104, X105, X108, X109 and X110. The areas of observed contamination extend from the north side to the southeastern area of the Jennison-Wright Corporation facility.

The total number of Level II targets within the area of observed contamination includes the five soil samples collected from residential yards and the residential yards between Level I contamination points (Reference 53; Reference 54; Reference 55; Figure 2-9). The samples showing observed contamination according to the Hazard Ranking System's Table 2-3 (Reference 1, page 51589) can be found below, along with their respective number of people per residence.

Address	Sample #	Resident Individuals	References
Non-responsive	X101	8	52, page 2
	X103	5	52, page 8
	X104	2	52, page 20
	X105	5	52, page 22
	X110	2.59	13, page 12.

The remainder of the residential population between points of Level I concentrations can be found below, along with their respective resident individuals and references.

<u>Address</u>	<u>Resident Individuals</u>	<u>References</u>
Non-responsive	4	52, page 3
	1	52, page 15
	1	52, page 16
	2	52, page 17
	1	52, page 9
	1	52, page 10
	3	52, page 11
	4	52, page 12
	2	52, page 13
	2	52, page 14
	5	52, page 15
	2.59	13, page 12
	2.59	13, page 12
	2.59	13, page 12
	2	52, page 19
	2	52, page 21
	1	52, page 23
	4	52, page 24
	6	52, page 25
	3	52, page 27

The populations were obtained by a residential survey conducted by the Illinois EPA on June 26, 1991 (Reference 52, pages 1-29). For residences where no survey was completed, the Madison County person per household average of 2.59 was used (Reference 13, page 12). The total number of individuals subject to Level II concentrations is 74.

<u>Area Letter</u>	<u>Resident Individuals</u>		<u>Total</u>
	<u>(Residences</u>	<u>County Multiplier</u>	
A			0
B			0
C			0
D			0
E			0
F			0
G			0
H			74
I			0

Sum of individuals subject to Level II concentrations: 74

Level I Concentrations Factor Value: 250  
Level II Concentrations Factor Value: 74

5.1.3.3 Workers

No workers have been on the Jennison-Wright Corporation facility since the filing of Chapter 11 Bankruptcy in 1989.

Total workers: 0

5.1.3.4 Resources

Resource Descriptor(s): No commercial agricultural areas, commercial silviculture areas, commercial livestock production areas or commercial livestock grazing areas are located on areas of observed contamination.

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Workers Factor Value: 0  
Resources Factor Value: 0

5.1.3.5 Terrestrial Sensitive Environments

No terrestrial Sensitive Environments are located within areas of observed contamination.

Value of EC: 0

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Terrestrial Sensitive Environments Factor Value 0

## 5.2 NEARBY POPULATION THREAT

5.2.1 Likelihood of Exposure5.1.1.1 Attractiveness/Accessibility

Area Letter	Descriptor(s) for Area	Value
A	Site is accessible with no public recreation. The site is surrounded by a fence, but the fence is not maintained (Reference 15, page 2).	10
B	Site is accessible with no public recreation. The site is surrounded by a fence, but the fence is not maintained (Reference 15, page 4).	10
C	Site is accessible with no public recreation. The site is surrounded by a fence, but the fence is not maintained (Reference 15, page 4).	10
D	Site is accessible with no public recreation. The site is surrounded by a fence, but the fence is not maintained (Reference 15, page 4).	10
E	Site is accessible with no public recreation. The Jennite lagoon is surrounded by a fence, but the fence is not maintained (Reference 15, page 4).	10
F	The 22nd Street lagoon is accessible in that no fence completely surrounds the lagoon. There is some public recreation use, as area is used for shortcuts by children and others walking through the area (Reference 15, pages 3-4).	25
G	The asbestos pile is accessible, but no public recreation use. The pile is surrounded by a fence, but the fence is not maintained (Reference 15, page 4).	10
H	The off-facility contaminated soils consist of residential yards and other areas lying between points of contamination. Areas between points of contamination are accessible, and are used for shortcuts by children and others walking through the area (Reference 15, page 2).	25
I	The on-facility contaminated soils are surrounded by a fence, but the fence is not maintained. Therefore, the soils are accessible with no public recreation use (Reference 15, pages 2, 4).	10

The highest value assigned for the attractiveness/accessibility factor is the 25 assigned to Letter F, 22nd Street Lagoon.

---

Attractiveness/Accessibility Factor Value: 25

**5.2.1.2 Area of Contamination**

The areas that meet the criteria for an observed release and have an attractiveness/accessibility value greater than zero are: Area A, Area B, Area C, Area D, Area E, Area F, Area G, Area H and Area I. The areas of observed contamination and their respective areas of contamination are found below. Area E, the Jennite Lagoon, has a total area of observed contamination, as measured by a planimeter from an aerial photograph (Reference 35; Reference 44), of 2,270 square feet. Area F, the 22nd Street Lagoon, has a total area of observed contamination, as measured by a planimeter and an aerial photograph (Reference 44; Reference 45), of 5,786.8 square feet. Area G, the asbestos pile, has a total area of 1,440 square feet as measured by IEPA personnel (Reference 46, page 7). Area H, contaminated soils within the residential areas, has a total area of observed contamination, as measured by a planimeter from an aerial photograph (Reference 47; Reference 48), of 121,892 square feet. Area I, contaminated soils on plant property, has a total area of observed contamination, as measured by a planimeter and an aerial photograph (Reference 47; Reference 48), of 172,268 square feet. The total area of observed contamination is 304,016.8 square feet.

<u>Area Letter</u>	<u>Size of Area of Observed Contamination (sq ft)</u>
E	2,270
F	5,786.8
G	1,800
H	121,892
I	172,268

**Total Area of Observed Contamination: 304,016.8**

**5.2.1.3 Likelihood of Exposure Factor Category**

From Table 5-7 of the Hazard Ranking System (Reference 1, page 51648), the total area of observed contamination value corresponding to 304,016.8 square feet is 60. Combining the area of observed contamination and the attractiveness/accessibility values in Table 5-8 of the Hazard Ranking System (Reference 1, page 51648), the nearby population likelihood of exposure value is 50.

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**Area of Contamination Factor Value: 60**  
**Nearby Population Threat Likelihood of Exposure**  
**Factor Category Value: 50**



## 5.2.2 WASTE CHARACTERISTICS

## 5.2.2.1 Toxicity

During the CERCLA Screening Site Inspection of November 1988 and the CERCLA Expanded Site Inspection of July 1991, the Illinois EPA collected soil samples on Jennison-Wright Corporation property and in residential areas north and west of the facility, along with waste samples on the facility property (Reference 26, pages 3-8; Reference 27, pages 1-5). Analysis of the samples documented the existence of the following compounds that meet or exceed the criteria for observed contamination as established in the Hazard Ranking System (Reference 1, page 51589).

Hazardous Substance	Toxicity Factor Value	Reference
Benzene	100	2
Toluene	10	2
Ethylbenzene	10	2
Xylene	1	2
Phenol	1	2
2-Methylphenol [cresol, o-]	10	2
4-Methylphenol [cresol, p-]	10	2
2,4-Dimethylphenol	100	2
Naphthalene	100	2
2-Methylnaphthalene	--	50
Acenaphthylene	--	2
Acenaphthene	10	2
Dibenzofuran	--	51
Fluorene	100	2
Pentachlorophenol	100	2
Phenanthrene	1	2
Anthracene	10	2
Fluoranthene [Benzo(j,k)fluorene]	100	2
Pyrene	100	2
Benzo(a)anthracene	1,000	2
Chrysene	--	2
Benzo(b)fluoranthene [Benzofluoranthene, 3,4-]	10,000	2
Benzo(k)fluoranthene	--	2
Benzo(a)pyrene	10,000	2
Indeno(1,2,3-c,d)pyrene	--	51
Dibenz(a,h)anthracene	10,000	2
Benzo(g,h,i)perylene	--	51
Cadmium	10,000	2
Chromium	10,000	2
Copper	--	2
Mercury	10,000	2
Zinc	10	2
Asbestos	10,000	2

Of the hazardous substances meeting or exceeding the criteria for observed contamination as established by the Hazard Ranking System (Reference 1, page 51589), the following compounds had a Toxicity Factor Value of 10,000: Benzo(b)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Cadmium, Chromium, Mercury and Asbestos.

Toxicity Factor Value: 10,000



5.2.2.2 Hazardous Waste Quantity

<u>Area Letter</u>	<u>Area Hazardous Waste Quantity Value</u>	<u>Constituent Quantity Data Complete? (Yes/No)</u>
A	24	NO
B	24	NO
C	319	NO
D	319	NO
E	175	NO
F	445	NO
G	53	NO
H	4	NO
I	5	NO

Sum of values: 1368

The sum of the area hazardous waste quantity values for areas of contamination A through I totals 1368. Utilizing Table 2-6 of the Hazard Ranking System (Reference 1, page 51591), the area hazardous waste quantity value of 1368 was assigned a Hazardous Waste Quantity Value of 100.

5.2.2.3 Calculation of Waste Characteristics Factor Category Value

Toxicity of 10,000 multiplied by the Hazardous Waste Quantity value of 100 equals 1,000,000 or  $1 \times 10^6$ . Utilizing Table 2-7 of the Hazard Ranking System (Reference 1, page 51592), the Hazardous Waste Quantity Factor Value of  $1 \times 10^6$  is assigned a Waste Characteristics Factor Category Value of 32.

Toxicity Factor Value x Hazardous Waste Quantity Factor Value:  $1 \times 10^6$

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Hazardous Waste Quantity Factor Value:  $1 \times 10^6$   
Waste Characteristics Factor Category Value: 32

5.2.3 TARGETS

5.2.3.1 Nearby Individual

A resident individual exists; therefore the nearby individual factor value is 0.

---

Nearby Individual Factor Value: 0

**5.2.3.2 Population Within 1 Mile**

The population within a 1-mile travel distance of the Jennison-Wright Corporation site includes residents, workers and students. The number of people residing, attending school and working within the 1-mile distance was determined by census tract information (Reference 57; References 58-63; Appendix A; Appendix B), and a telephone conversation with a nearby school (Reference 64). The total population for each distance category is given below.

<u>Travel Distance Category (miles)</u>	<u>Number of People</u>	<u>Reference</u>	<u>Distance-Weighted Value (Table 5-10)</u>
>0 to 1/4	1256	56-64	41
>1/4 to 1/2	3205	56-64	65
>1/2 to 1	7046	56-64	33

Sum of Distance-weighted Values: 139

The sum of the distance-weighted values, 139, was divided by 10 as stated in the federal Hazard Ranking System (Reference 1, page 51649), to obtain the Population Within 1 Mile Factor Value of 14.

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Population Within 1 Mile Factor Value: 14

## 6.1.1 OBSERVED RELEASE

No observed release to the air pathway was documented. The air pathway will be scored using the potential to release.

## 6.1.2 POTENTIAL TO RELEASE

## 6.1.2.1 GAS POTENTIAL TO RELEASE

Source(s): 1 (above ground railroad tank car), 3 (storage tank #1) and 4 (storage tank #2) are all storage tanks which were used for the storage of wood treating waste or product. Source 1 is a 12,000 gallon (Reference 31) leaking above ground railroad tank car, source 3 is a 159,608 gallon (Reference 38) leaking above ground storage tank and source 4 is a 159,608 gallon (Reference 38) leaking above ground storage tank. These tanks all have similar compounds and all are containers containing liquids.

Hazardous Substance	Vapor Pressure	Reference
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzene	$9.5 \times 10^{-1}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
2,4-Dimethylphenol	$9.8 \times 10^{-2}$	2
Ethylbenzene	$9.6 \times 10^{-0}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
4-Methylphenol	$1.1 \times 10^{-1}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Phenol	$3.5 \times 10^{-1}$	2
Pyrene	$2.5 \times 10^{-6}$	2
Toluene	$2.8 \times 10^{-1}$	2
Xylene	$8.8 \times 10^{-0}$	2

## 6.1.2.1.1 GAS CONTAINMENT

Sources 1, 3 and 4 are all containers, but they are not sealed or intact (Reference 15, pages 1-3). Because Table 6-3 of the Hazard Ranking System (Reference 1, page 51652) does not specifically describe this situation, a containment value of 10 is assigned to these sources.

---

Gas Containment Factor Value: 10

**6.1.2.1.2 GAS SOURCE TYPE**

**Source(s):** 1 (above ground railroad tank car), 3 (storage tank #1) and 4 (storage tank #2) are all storage tanks which were used for the storage of wood treating waste or product. Source 1 is a 12,000 gallon (Reference 31) leaking above ground railroad tank car, source 3 is a 159,608 gallon (Reference 38) leaking above ground storage tank and source 4 is a 159,608 gallon (Reference 38) leaking above ground storage tank.

**Source Type:** From Table 6-4 of the Hazard Ranking System (Reference 1, 51652), these sources would be classified as containers or tanks, not elsewhere specified. The assigned gas source type factor value from Table 6-4 for this source type is 28 (Reference 1, page 51652).

**Rationale:** The railroad tank car and the storage tanks (sources 1, 3 and 4) are not buried or below-ground (Reference 15, pages 1-3); therefore, "containers or tanks not elsewhere specified" best describes these sources (Reference 1, 51652).

---

Gas Source Type Factor Value: 28

## 6.1.2.1.3 GAS MIGRATION POTENTIAL

Source(s): 1 (above ground railroad tank car), 3 (storage tank #1) and 4 (storage tank #2) are all storage tanks which were used for the storage of wood treating waste or product. Source 1 is a 12,000 gallon (Reference 31) leaking above ground railroad tank car, source 3 is a 159,608 gallon (Reference 38) leaking above ground storage tank and source 4 is a 159,608 gallon (Reference 38) leaking above ground storage tank.

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value	Reference
Benzene	17	2
Ethylbenzene	17	2
Toluene	17	2
Xylene	17	2
Acenaphthene	11	2
Acenaphthylene	11	2
2,4-Dimethylphenol	11	2
Fluorene	11	2
Mercury	11	2
4-Methylphenol [cresol, p-]	11	2
Naphthalene	11	2
Phenanthrene	11	2
Phenol	11	2
Anthracene	6	2
Benzo(a)anthracene	6	2
Benzo(a)pyrene	6	2
Benzo(b)fluoranthene	6	2
Benzo(k)fluoranthene	6	2
Chrysene	6	2
Pyrene	6	2

The three hazardous substances with the highest gas migration potential values are benzene, ethylbenzene and toluene. All three substances have a gas migration value of 17 (Reference 2), with an average gas migration potential of 17.

Average 17

The average of the three highest gas migration potential values is 17. Using Table 6-7 of the Hazard Ranking System (Reference 1, page 51653), the assigned gas migration potential factor value is 17.

---

Gas Migration Potential Factor Value: 17

## 6.1.2 POTENTIAL TO RELEASE

## 6.1.2.1 GAS POTENTIAL TO RELEASE

Source(s): Source 2 is a 12,000 gallon buried railroad tank car (Reference 31) that was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31).

<u>Hazardous Substance</u>	<u>Vapor Pressure</u>	<u>Reference</u>
Acenaphthene	$2.5 \times 10^{-3}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzene	$9.5 \times 10^{-1}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Ethylbenzene	$9.6 \times 10^{-0}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Pentachlorophenol	$1.1 \times 10^{-4}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2
Toluene	$2.8 \times 10^{-1}$	2
Xylene	$8.8 \times 10^{-0}$	2

## 6.1.2.1.1 GAS CONTAINMENT

There is less than one foot of uncontaminated soil cover over the buried railroad tank car (Reference 15, page 2). The descriptor that applies to this source, according to Table 6-3 (Reference 1, page 51652), is uncontaminated soil cover less than one foot. The assigned gas containment factor value from Table 6-3 (Reference 1, page 51652) is 10.

---

Gas Containment Factor Value: 10

**6.1.2.1.2 GAS SOURCE TYPE**

**Source(s):** Source 2 is a 12,000 gallon buried railroad tank car (Reference 31) that was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31).

**Source Type:** From Table 6-4 of the Hazard Ranking System (Reference 1, page 51652), this source would be classified a container or tank (buried/below-ground), with no evidence of biogas release. The assigned gas source type factor value from Table 6-4 for this source type is 11 (reference 1, page 51652).

**Rationale:** Source 2 is a buried railroad tank car, with no evidence of a biogas release (Reference 15, page 2).

---

**Gas Source Type Factor Value: 11**



## 6.1.2.1.3 GAS MIGRATION POTENTIAL

Source(s): Source 2 is a 12,000 gallon buried railroad tank car (Reference 31) that was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31).

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value	Reference
Benzene	17	2
Ethylbenzene	17	2
Toluene	17	2
Xylene	17	2
Acenaphthene	11	2
Fluorene	11	2
Mercury	11	2
Naphthalene	11	2
Phenanthrene	11	2
Anthracene	6	2
Benzo(a)anthracene	6	2
Benzo(a)pyrene	6	2
Benzo(b)fluoranthene	6	2
Benzo(k)fluoranthene	6	2
Chrysene	6	2
Pentachlorophenol	6	2
Pyrene	6	2

The three hazardous substances with the highest gas migration potential values are benzene, ethylbenzene and toluene. All three substances have a gas migration value of 17, with an average gas migration potential of 17.

Average 17

The average of the three highest gas migration potential values is 17. Using Table 6-7 of the Hazard Ranking System (Reference 1, page 51653), the assigned gas migration potential factor value is 17.

---

Gas Migration Potential Factor Value: 17

## 6.1.2 POTENTIAL TO RELEASE

## 6.1.2.1 GAS POTENTIAL TO RELEASE

Source(s): 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are lagoons that were used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, pages 7). These two lagoons have similar compounds and are partially buried/backfilled (Reference 14, page 7; Reference 15, page 3).

<u>Hazardous Substance</u>	<u>Vapor Pressure</u>	<u>Reference</u>
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2

## 6.1.2.1.1 GAS CONTAINMENT

Sources 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are both lagoons that have less than 1 foot of uncontaminated soil cover (Reference 15, pages 3-4), with very little vegetative growth on the surface (Reference 15, pages 3-4). The descriptor for these sources, according to Table 6-3 (Reference 1, page 51652) of the Hazard Ranking System, is uncontaminated soil cover less than 1 foot: other. The assigned gas containment factor value from Table 6-3 (Reference 1, page 51652) is 10.

---

Gas Containment Factor Value: 10

**6.1.2.1.2 GAS SOURCE TYPE**

✓ **Source(s):** 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are lagoons that were used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, pages 7). These two lagoons have similar compounds and are partially buried/backfilled (Reference 14, page 7; Reference 15, page 3).

**Source Type:** Surface Impoundment (buried/backfilled): no evidence of biogas release (Reference 15, pages 3-4). The assigned gas source type factor value from Table 6-4 of the Hazard Ranking System (Reference 1, page 51652) for this source type is 11.

**Rationale:** Sources 5 and 6 are both surface impoundments that have less than 1 foot of uncontaminated soil cover (Reference 15, pages 3-4). The surface impoundments have been backfilled, with no evidence of biogas release (Reference 15, pages 3-4).

---

Gas Source Type Factor Value: 11

## 6.1.2.1.3 GAS MIGRATION POTENTIAL

Source(s): 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are lagoons that were used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, pages 7). These two lagoons have similar compounds and are partially buried/backfilled (Reference 14, page 7; Reference 15, page 3).

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value	Reference
Acenaphthene	11	2
Acenaphthylene	11	2
Fluorene	11	2
Naphthalene	11	2
Phenanthrene	11	2
Anthracene	6	2
Benzo(a)anthracene	6	2
Benzo(a)pyrene	6	2
Benzo(b)fluoranthene	6	2
Benzo(k)fluoranthene	6	2
Chrysene	6	2
Pyrene	6	2

The three hazardous substances with the highest gas migration potential values are fluorene, naphthalene and acenaphthene. All three substances have a gas migration value of 11 (Reference 2, with an average gas migration potential of 11.

Average 11

The average of the three highest gas migration potential values is 11. Using Table 6-7 of the Hazard Ranking System (Reference 1, page 51653), the assigned gas migration potential factor value is 11.

---

Gas Migration Potential Factor Value: 11

## 6.1.2 POTENTIAL TO RELEASE

## 6.1.2.1 GAS POTENTIAL TO RELEASE

Source(s): Source 8 (contaminated soils within residential areas) and 9 (contaminated soils on plant property) are contaminated with similar compounds, and have less than 1 foot of uncontaminated soil cover (Reference 26, pages 6-8; Reference 27, pages 1-6).

Hazardous Substance	Vapor Pressure	Reference
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Pentachlorophenol	$1.1 \times 10^{-4}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2
Toluene	$2.8 \times 10^{-1}$	2

## 6.1.2.1.1 GAS CONTAINMENT

The descriptor from Table 6-3 (Reference 1:51652) that describes sources 8 and 9 is uncontaminated soil cover less than 1 foot: other. The residential and plant property soils were sampled, with contamination documented within the top 6 inches of soils (Reference 26, pages 7-8; Reference 27, pages 1-5, 7, 8). The soils located in residential areas and on plant property contained little vegetative cover (Reference 15, pages 2 and 4). Therefore, the uncontaminated soil cover is less than 1 foot: other. The assigned gas containment factor value from Table 6-3 (Reference 1, page 51652) is 10.

---

Gas Containment Factor Value: 10

**6.1.2.1.2 GAS SOURCE TYPE**

**Source(s):** Source 8 (contaminated soils within residential areas) and 9 (contaminated soils on plant property) are contaminated with similar compounds, and have less than 1 foot of uncontaminated soil cover (Reference 26, pages 6-8; Reference 27, pages 1-6).

**Source Type:** From Table 6-4 of the Hazard Ranking System (Reference 1, page 51652), these sources would be classified as contaminated soil. The assigned gas source type factor value from Table 6-4 for this source type is 19 (Reference 1, page 51652).

**Rationale:** Sources 8 and 9 consist solely of contaminated soil which resulted from previous site activities.

---

Gas Source Type Factor Value: 19

## 6.1.2.1.3 GAS MIGRATION POTENTIAL

Source(s): Source 8 (contaminated soils within residential areas) and 9 (contaminated soils on plant property) are contaminated with similar compounds, and have less than 1 foot of uncontaminated soil cover (Reference 26, pages 6-8; Reference 27, pages 1-6).

<u>Gaseous Hazardous Substance</u>	<u>Hazardous Substance Gas Migration Potential Value</u>	<u>Reference</u>
Toluene	17	2
Acenaphthene	11	2
Acenaphthylene	11	2
Fluorene	11	2
Mercury	11	2
Naphthalene	11	2
Phenanthrene	11	2
Anthracene	6	2
Benzo(a)anthracene	6	2
Benzo(a)pyrene	6	2
Benzo(b)fluoranthene	6	2
Benzo(k)fluoranthene	6	2
Chrysene	6	2
Pentachlorophenol	6	2
Pyrene	6	2

The three hazardous substances with the highest gas migration potential values are toluene, acenaphthene and naphthalene. Toluene has a value of 17, acenaphthene a value of 11 and naphthalene a value of 11. The three add up to 39, which when divided by 3 gives an average gas migration potential factor of 13.

Average 13

The average of the three highest gas migration potential values is 13. Using Table 6-7 of the Hazard Ranking System (Reference 1, page 51653), the assigned gas migration potential factor value is 11.

---

Gas Migration Potential Factor Value: 11

## 6.1.2.2 PARTICULATE POTENTIAL TO RELEASE

Source(s): 1 (above ground railroad tank car), 3 (storage tank #1) and 4 (storage tank #2) are all storage tanks which were used for the storage of wood treating waste or product. Source 1 is a 12,000 gallon (Reference 31) leaking above ground railroad tank car, source 3 is a 159,608 gallon (Reference 38) leaking above ground storage tank and source 4 is a 159,608 gallon (Reference 38) leaking above ground storage tank.

Hazardous Substance	Vapor Pressure	Reference
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
2,4-Dimethylphenol	$9.8 \times 10^{-2}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2

## 6.1.2.2.1 PARTICULATE CONTAINMENT

Sources 1, 3 and 4 are all containers that contain only liquids. The assigned particulate containment factor value from Table 6-9 (Reference 1, page 51653) for containers containing liquids is 0.

Because Sources 1,3,4 have been assigned a particulate containment factor value of 0, the particulate source type factor and particulate migration potential factor will not be evaluated (NE).

Particulate Containment Factor Value: 0

## 6.1.2.2.2 PARTICULATE SOURCE TYPE

NE

## 6.1.2.2.3 PARTICULATE MIGRATION POTENTIAL

NE



## 6.1.2.2 PARTICULATE POTENTIAL TO RELEASE

Source(s): Source 2 is a 12,000 gallon buried railroad tank car (Reference 31) that was used for the storage of pentachlorophenol (Reference 14, page 6; Reference 31).

<u>Hazardous Substance</u>	<u>Vapor Pressure</u>	<u>Reference</u>
Acenaphthene	$2.5 \times 10^{-3}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Pentachlorophenol	$1.1 \times 10^{-4}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2

## 6.1.2.2.1 PARTICULATE CONTAINMENT

Source 2, the buried railroad tank car, does not consist solely of an intact, sealed container, but does contain only liquids. The assigned particulate containment factor value from Table 6-9 (Reference 1, page 51653) for containers containing liquids is 0.

Because Source 2 has been assigned a particulate containment factor value of 0, the particulate source type factor and particulate migration potential factor will not be evaluated (NE).

Particulate Containment Factor Value: 0

## 6.1.2.2.2 PARTICULATE SOURCE TYPE

NE

## 6.1.2.2.3 PARTICULATE MIGRATION POTENTIAL

NE

#### 6.1.2.2 PARTICULATE POTENTIAL TO RELEASE

Source(s): 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are lagoons that were used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, pages 7). These two lagoons have similar compounds and are partially buried/backfilled (Reference 14, page 7; Reference 15, page 3).

<u>Hazardous Substance</u>	<u>Vapor Pressure</u>	<u>Reference</u>
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2

#### 6.1.2.2.1 PARTICULATE CONTAINMENT

Sources 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are both lagoons that have less than 1 foot of uncontaminated soil cover (Reference 15, pages 3-4). Both lagoons have very little vegetative growth on the surface (Reference 15, pages 3-4). The descriptor for these sources, found in Table 6-9 (reference 1, page 51652) is "uncontaminated soil cover less than one foot: other". The assigned particulate containment factor value from Table 6-9 (Reference 1, page 51653) is 10.

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Particulate Containment Factor Value: 10

6.1.2.2.2 PARTICULATE SOURCE TYPE

Source(s): 5 (Jennite Lagoon) and 6 (22nd Street Lagoon) are lagoons that were used for the disposal of wastes and wastewaters contaminated with creosote, pentachlorophenol and related compounds (Reference 14, pages 7). These two lagoons have similar compounds and are partially buried/backfilled (Reference 14, page 7; Reference 15, page 3).

Source Type: From Table 6-4 of the Hazard Ranking System (Reference 1, page 51652), these sources would be classified as surface impoundments (buried/backfilled): no evidence of biogas release (Reference 15, pages 3-4). The assigned particulate source type factor value from Table 6-4 for this source type is 22 (Reference 1, page 51652).

Rationale: Sources 5 and 6 are surface impoundments that have less than 1 foot of uncontaminated soil cover (Reference 15, pages 3-4). The surface impoundments have been backfilled, with no evidence of biogas release (Reference 15, pages 3-4).

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Particulate Source Type Factor Value: 22

**6.1.2.2.3 PARTICULATE MIGRATION POTENTIAL**

The Jennison-Wright Corporation site is located in Granite City, Madison County, Illinois (Reference 4; Figure 2-1). According to Figure 6-2 of the Hazard Ranking System (Reference 1, page 51654), the assigned particulate migration potential factor for this area is 6.

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**Particulate Migration Potential Factor Value: 6**

## 6.1.2.2 PARTICULATE POTENTIAL TO RELEASE

Source(s): Source 8 (contaminated soils within residential areas) and 9 (contaminated soils on plant property) are contaminated with similar compounds, and have less than 1 foot of uncontaminated soil cover (Reference 26, pages 6-8; Reference 27, pages 1-6).

Hazardous Substance	Vapor Pressure	Reference
Acenaphthene	$2.5 \times 10^{-3}$	2
Acenaphthylene	$9.1 \times 10^{-4}$	2
Anthracene	$2.7 \times 10^{-6}$	2
Benzo(a)anthracene	$3.1 \times 10^{-8}$	2
Benzo(a)pyrene	$5.5 \times 10^{-9}$	2
Benzo(b)fluoranthene	$5.0 \times 10^{-7}$	2
Benzo(k)fluoranthene	$1.0 \times 10^{-9}$	2
Chrysene	$6.2 \times 10^{-9}$	2
Fluorene	$8.4 \times 10^{-3}$	2
Mercury	$2.0 \times 10^{-3}$	2
Naphthalene	$8.5 \times 10^{-2}$	2
Pentachlorophenol	$1.1 \times 10^{-4}$	2
Phenanthrene	$1.1 \times 10^{-4}$	2
Pyrene	$2.5 \times 10^{-6}$	2

## 6.1.2.2.1 PARTICULATE CONTAINMENT

The descriptor from Table 6-3 (Reference 1:51652) that describes sources 8 and 9 is uncontaminated soil cover less than 1 foot: other. The residential and plant property soils were sampled, with contamination documented within the top 6 inches of soils (Reference 26, pages 7-8; Reference 27, pages 1-5, 7, 8). The soils located in residential areas and on plant property contained little vegetative cover (Reference 15, pages 2 and 4). Therefore, the uncontaminated soil cover is less than 1 foot: other. The assigned particulate containment factor value from Table 6-9 (Reference 1, page 51653) is 10.

---

Particulate Containment Factor Value: 10

**6.1.2.2.2 PARTICULATE SOURCE TYPE**

**Source(s):** Source 8 (contaminated soils within residential areas) and 9 (contaminated soils on plant property) are contaminated with similar compounds, and have less than 1 foot of uncontaminated soil cover (Reference 26, pages 6-8; Reference 27, pages 1-6).

**Source Type:** Contaminated Soil. The assigned value from Table 6-4 for this source type is 22 (Reference 1, page 51652).

**Rationale:** Sources 8 and 9 consist solely of contaminated soil as the result of site activities.

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**Particulate Source Type Factor Value: 22**

**6.1.2.2.3 PARTICULATE MIGRATION POTENTIAL**

The Jennison-Wright Corporation site is located in Granite City, Madison County, Illinois (Reference 4; Figure 2-1). According to Figure 6-2 of the Hazard Ranking System (Reference 1, page 51654), the assigned particulate migration potential factor for this area is 6.

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**Particulate Migration Potential Factor Value: 6**

## 6.2 WASTE CHARACTERISTICS

## 6.2.1 TOXICITY/MOBILITY

During the CERCLA Screening Site Inspection of November 1988 and the CERCLA Expanded Site Inspection of July 1991, the Illinois EPA collected soil and waste samples from Jennison-Wright Corporation property and nearby residential areas. (Reference 26, pages 1-8; Reference 27, pages 1-9). Analysis of the samples documented the existence of compounds associated with the sources at the Jennison-Wright Corporation facility. These compounds can be found below. The values associated with each compound were obtained from the Superfund Chemical Data Matrix (Reference 2) and Table 6-13 of the Hazard Ranking System (Reference 1, page 51660).

Hazardous Substance	Toxicity Factor Value	Gas Mobility Factor Value	Particulate Mobility Factor Value	Toxicity/ Mobility Factor Value (Table 6-13)	Ref.
Acenaphthene	10	0.2	0.0002	2.0	1,2
Acenaphthylene	--	0.02	0.0002	0.0	1,2
Anthracene	10	0.002	0.0002	0.02	1,2
Benzene	100	1.0	0.0002	100.0	1,2
Benzo(a)anthracene	1,000	0.0002	0.0002	0.2	1,2
Benzo(a)pyrene	10,000	0.0002	0.0002	2.0	1,2
Benzo(b)fluoranthene	10,000	0.002	0.0002	20.0	1,2
Benzo(k)fluoranthene	--	0.0002	0.0002	0.0	1,2
Chrysene	--	0.0002	0.0002	0.0	1,2
2,4-Dimethylphenol	100	0.20	0.0002	20.0	1,2
Ethylbenzene	10	1.0	0.0002	10.0	1,2
Fluorene	100	0.2	0.0002	20.0	1,2
Mercury	10,000	0.2	0.0002	2,000.0	1,2
4-Methylphenol	10	1.0	0.0002	10.0	1,2
Naphthalene	100	0.2	0.0002	20.0	1,2
Pentachlorophenol	100	0.02	0.0002	2.0	1,2
Phenanthrene	1	0.02	0.0002	0.02	1,2
Phenol	1	1.0	0.0002	1.0	1,2
Pyrene	100	0.002	0.0002	0.2	1,2
Toluene	10	1.0	0.0002	10.0	1,2
Xylene	1	1.0	0.0002	1.0	1,2

The hazardous substance with highest Toxicity/Mobility Factor Value is mercury at 2,000.

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Toxicity/Mobility Factor Value: 2,000



## 6.2.2 HAZARDOUS WASTE QUANTITY

Source Number	Source Hazardous Waste	Is Source Hazardous
	Quantity Value (Section 2.4.2.1.5)	Constituent Quantity Data Complete? (yes/no)
1	24	No
2	24	No
3	319	No
4	319	No
5	175	No
6	445	No
8	4	No
9	5	No

---

Sum of values: 1315

From Table 2-6 of the Hazard Ranking System (Reference 1, page 51591), the assigned Hazardous Waste Quantity Factor Value is 100.

## 6.2.3 WASTE CHARACTERISTICS FACTOR CATEGORY VALUE

The highest Toxicity/Mobility Factor Value (2,000 for mercury) and the Hazardous Waste Quantity Factor Value of 100 was multiplied to obtain a Waste Characteristics product. The product was applied to Table 2-7 (Reference 1, page 51592) to determine a Waste Characteristics Factor Category Value. Utilizing Table 2-7 of the Hazard Ranking System (Reference 1, page 51592), the Hazardous Waste Quantity Factor Value of  $2 \times 10^5$  is assigned a Waste Characteristics Factor Category Value of 18.

Toxicity/Mobility factor [2,000] x Hazardous Waste Quantity factor [100] = 200,000 or  $2 \times 10^5$

Toxicity/mobility factor value  
x hazardous waste quantity factor value = 200,000

---

Hazardous Waste Quantity Factor Value:  $2 \times 10^5$   
Waste Characteristics Factor Category Value: 18

### 6.3 TARGETS

#### Level I Distance Categories

Not evaluated (NE)

#### Level II Distance Categories

NE

#### Actual Contamination Distance Categories

NE

#### Potential Contamination Distance Categories

No Level I or Level II targets have been documented, therefore all target distance categories in Table 6-15 of the Hazard Ranking System (Reference 1, page 51661) apply to potential contamination. The applicable distance categories can be found below.

0

Greater than 0 to 1/4 mile

Greater than 1/4 to 1/2 mile

Greater than 1/2 mile to 1 mile

Greater than 1 mile to 2 miles

Greater than 2 miles to 3 miles

Greater than 3 miles to 4 miles

6.3.1 NEAREST INDIVIDUAL FACTOR

Nearest Individual - Level I Concentrations

Not Evaluated (NE)

Nearest Individual - Level II Concentrations

NE

Nearest Individual - Potential Contamination

The regularly occupied building or residence nearest to a source is the residence at 2300 Logan Street, Granite City, Illinois. This residence is 21 feet from an area of observed contamination (Reference 27, pages 4-5; Reference 33, pages 59-64). The number of people residing at 2300 Logan Street is unknown; therefore the Madison County average of 2.59 persons per household was used (Reference 13, page 12).

Residence, building or area nearest to source: Residence at 2300 Logan Street, Granite City, Illinois, which is north of the Jennison-Wright Corporation facility.

Location: Soil sample X110 was collected approximately 21 feet east and 7 feet north from the northeast corner of the house at 2300 Logan Street, which is north of the Jennison-Wright Corporation facility (Reference 27, pages 4-5).

Source: 8 - contaminated soils (residential areas)

Distance from the nearest source in miles: The house located at 2300 Logan Street is approximately 21 feet (Reference 27, pages 4-5) from an area of observed contamination as documented by sample X110. Soil sample X110 was collected during the CERCLA Expanded Site Inspection in the yard of the residence at 2300 Logan Street (Reference 27, pages 4-5). The analytical results from sample X110 (Reference 33, pages 59-64) indicated an area of observed contamination in the yard approximately 21 feet from the northeast corner of the house (Reference 27, pages 4-5).

References: 27, pages 4-5; Reference 33, pages 59-64.

The closest residence or regularly occupied building is approximately 21 feet or 0.004 miles from an area of observed contamination (reference 27, pages 4-5; Reference 33, pages 59-64). Using Table 6-16 of the Hazard Ranking System (Reference 1, page 51661), the nearest individual factor value is 20.

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Nearest Individual Factor Value: 20

## Air-Level I Population

### 6.3.2 POPULATION

#### 6.3.2.2 LEVEL I CONCENTRATIONS

Not Evaluated (NE)

#### 6.3.2.3 LEVEL II CONCENTRATIONS

NE

#### 6.3.2.4. POTENTIAL CONTAMINATION

Distance Category	Population	Reference(s)	Population Range	Distance-Weighted Population Value
0	99	1, 52	31 - 1000	53
>0 to 1/4	1256	1, 56-64	1001 - 3000	408
>1/4 to 1/2	3205	1, 56-64	3001 - 10000	282
>1/2 to 1	7046	1, 56-64	3001 - 10000	83
>1 to 2	15825	1, 56-64	10001 - 30000	83
>2 to 3	12021	1, 56-64	10001 - 30000	38
>3 to 4	4715	1, 56-64	3001 - 10000	7

Adding the distance weighted population values, the assigned value for the Distance-Weighted Population Subject to Potential Contamination is 954. To obtain the Potential Contamination Factor Value, the value of 954 was multiplied by 1/10 (Reference 1, page 51661). The assigned value for the Potential Contamination Factor Value is 95.

=====

Distance-weighted  
Population Subject  
to Potential  
Contamination: 954

Potential Contamination Factor Value: 95

### 6.3.3 RESOURCES

No commercial agriculture, commercial silviculture or major designated recreation areas are known to exist within one-half mile of the Jennison-Wright Corporation facility.

- Commercial agriculture  
None Identified
- Commercial silviculture  
None Identified
- Major or designated recreation areas  
None Identified

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Resources Factor Value: 0

**Air-Sensitive Environments Actual Contamination**

**6.3.4 SENSITIVE ENVIRONMENTS**

**6.3.4.1 ACTUAL CONTAMINATION**

**Sensitive Environments**

Not Evaluated (NE)

**Sum of Sensitive Environments Value: 0**

**Wetlands**

NE

No sensitive environments or wetlands are subject to actual contamination and were not evaluated at this time.

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**Sensitive Environment Actual Contamination Factor Value: 0**

# Air-Sensitive Environments Potential Contamination

## 6.3.4.2 POTENTIAL CONTAMINATION

The habitats of a number of state endangered and threatened species are located within 4 miles of the Jennison-Wright Corporation site (Reference 66). The table below lists these habitats, which were identified by the Illinois Department of Conservation.

<u>Sensitive Environment</u>	<u>Distance Category</u>	<u>Reference(s)</u>	<u>Sensitive Environment Value(s)</u>
Horseshoe Lake	2-3 miles	67	50
State endangered Pied-billed Grebe	2-3 miles	67	50
State endangered Yellow-headed Blackbird	2-3 miles	67	50
State threatened Common Moorhen	2-3 miles	67	50
State endangered Black-crowned Night Herons	3-4 miles	67	50
State endangered Little Blue Herons	3-4 miles	67	50
State endangered Great Egrets	3-4 miles	67	50
State endangered Snowy Egrets	3-4 miles	67	50
Federal threatened Decurrent False Aster	3-4 miles	67	75

Wetlands within four miles of the Jennison-Wright Corporation facility were identified using the United States Department of Interior National Wetlands Inventory Maps (Reference 7; Reference 8; Reference 9; Reference 10). The wetlands acreage measures within each distance category is given below.

<u>Distance Category</u>	<u>Wetlands Acreage</u>	<u>Reference(s)</u>	<u>Wetlands Value per Distance Category</u>
0	0	7, 8, 9, 10	0
0 - 1/4 mile	0	7, 8, 9, 10	0
1/4 - 1/2 mile	0	7, 8, 9, 10	0
1/2 - 1 mile	33	7, 8, 9, 10	25
1 - 2 miles	104	7, 8, 9, 10	125
2 - 3 miles	221	7, 8, 9, 10	250
3 - 4 miles	374	7, 8, 9, 10	350

#### 6.3.4.2 POTENTIAL CONTAMINATION (cont)

For each distance category, the sum of the Sensitive Environment Values and the sum of the Wetlands Values were multiplied by the distance weight for that distance category giving a distance weighted product. The distance weight multipliers were obtained from Table 6-15 of the Hazard Ranking System (Reference 1, page 51661)

Distance Category	Sum of Sensitive Environment Values ( $S_j$ )	Wetland Acreage Value ( $W_j$ )	Distance Weight ( $D_j$ )	$D_j(W_j + S_j)$
0	0	0	1.0	0
0 - 1/4 mile	0	0	0.25	0
1/4 - 1/2 mile	0	0	0.054	0
1/2 - 1 mile	0	25	0.016	0.4
1 - 2 miles	0	125	0.0051	0.6375
2 - 3 miles	200	250	0.0023	1.035
3 - 4 miles	275	350	0.0014	0.875

Adding all the distance-weighted products, the sum is 2.9475. To obtain the Sensitive Environments Potential Contamination Factor Value, 2.9475 is divided by 10 as required in the Hazard Ranking System (Reference 1, page 51662). The assigned value to the Sensitive Environments Potential Contamination Factor value is 0.29475.

$$\begin{aligned} \text{Sum of } D_j(W_j + S_j) &: 2.9475 \\ (\text{Sum of } D_j(W_j + S_j))/10 &: 0.29475 \end{aligned}$$

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**Sensitive Environments Potential Contamination Factor Value: 0.29475**